PART P
HAZARDOUS WASTE OPERATIONS AND TREATMENT, STORAGE, AND DISPOSAL FACILITIES

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296-62-300 Hazardous waste operations and treatment, storage, and disposal facilities.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-300, filed 03/23/99, effective 06/23/99. Statutory Authority: Chapter 49.17 RCW. 94-15-096 (Order 94-07), 296-62-300, filed 7/20/94, effective 9/20/94; 91-24-017 (Order 91-07), 296-62-300, filed 11/22/91, effective 12/24/91; 90-20-091 (Order 90-14), 296-62-300, filed 10/1/90, effective 11/15/90; 89-21-018 (Order 89-10), 296-62-300, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-300, filed 10/6/88, effective 11/7/88.]

WAC 296-62-30001 Scope and application

(1) Scope. This section covers employers who have employees who work in the following operations:

(a) Clean-up operations required by a governmental body, whether federal, state, local, or other involving hazardous substances that are conducted at uncontrolled hazardous waste sites (including, but not limited to, the EPA's National Priority Site List (NPL), state priority site lists, sites recommended for the EPA NPL, and initial investigations of government identified sites which are conducted before the presence or absence of hazardous substances has been ascertained);

(b) Corrective actions involving clean-up operations at sites covered by the Resource Conservation and Recovery Act of 1976 (RCRA) as amended (42 U.S.C. 6901 et seq.);

(c) Voluntary clean-up operations at sites recognized by federal, state, local, or other governmental bodies as uncontrolled hazardous waste sites;

(d) Operations involving hazardous wastes that are conducted at treatment, storage, and disposal (TSD) facilities regulated by 40 CFR Parts 264 and 265 under RCRA; or by agencies under agreement with U.S.E.P.A. to implement RCRA regulations.

(2) Application.

(a) All requirements of this chapter and chapters 296-24, 296-155, and 296-800 WAC apply to hazardous waste operations whether covered by this part or not. If there is a conflict or overlap, the provision more protective of employee safety and health must apply.

(b) Hazardous substance clean-up operations within the scope of subsection (1)(a), (b), and (c) of this section must comply with all sections of WAC 296-62-410, Part R, Emergency response to hazardous substance release.

(c) Operations within the scope of subsection (1)(d) of this section must comply only with the requirements of WAC 296-62-3140 through 296-62-31430.

Notes and Exceptions:

(i) All provisions of WAC 296-62-3140 through 296-62-31430 cover any treatment, storage, or disposal (TSD) operation regulated by 40 CFR Parts 264 and 265 or by state law authorized under RCRA, and required to have a permit or interim status from EPA under 40 CFR 270.1 or from a state agency under RCRA.

(ii) Employers who are not required to have a permit or interim status because they are conditionally exempt small quantity generators under 40 CFR 261.5 or are generators who qualify under 40 CFR 262.34 for exemptions from regulation under 40 CFR Parts 264, 265, and 270 ("excepted employers") are not covered by WAC 296-62-31405 through 296-62-31445. Excepted employers who are required by the EPA or state agency to have their employees engage in emergency response or who direct their employees to engage in emergency response are covered by WAC 296-62-31450 through 296-62-31470 and cannot be exempted by WAC 296-62-31455. Excepted employers who are not required to have employees engage in emergency response, who direct their employees to evacuate in the case

of such emergencies and who meet the requirements of WAC 296-62-31455 are exempt from the balance of WAC 296-62-31450 through 296-62-31470.

WAC 296-62-30001 (Cont.)

(iii) If an area is used primarily for treatment, storage or disposal, any emergency response operations in that area must comply with WAC 296-62-31410 through 296-62-31470. In other areas not used primarily for treatment, storage or disposal, any emergency response operations must comply with WAC 296-62-410, Part R, Emergency response to hazardous substance release. Compliance with the requirements of WAC 296-62-410, Part R, Emergency response to hazardous substance release must be deemed to be in compliance with the requirements of WAC 296-62-31450 through 296-62-31470.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038, (Order 99-36), § 296-62-30001, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-18), § 296-62-30001, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30003 Definitions.

"Buddy system" means a system of organizing employees into work groups in such a manner that each employee of the work group is designated to be observed by at least one other employee in the work group. The purpose of the buddy system is to provide rapid assistance to employees in the event of an emergency.

"Clean-up operation" means an operation where hazardous substances are removed, contained, incinerated, neutralized, stabilized, cleared-up, or in any other manner processed or handled with the ultimate goal of making the site safer for people or the environment.

"Contamination reduction zone" means the buffer between the exclusion zone and the outermost clean zone.

"Decontamination" means the removal of hazardous substances from employees and their equipment to the extent necessary to preclude the occurrence of foreseeable adverse health effects.

"Emergency response" or **"responding to emergencies"** means a response effort by employees from outside the immediate release area or by other designated responders (i.e., mutual aid groups, local fire departments, etc.) to an occurrence which results, or is likely to result, in an uncontrolled release of a hazardous substance. Responses to incidental releases of hazardous substances where the substance can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate release area or by maintenance personnel are not considered to be emergency responses within the scope of this standard. Responses to release of hazardous substances where there is no potential safety or health hazard (i.e., fire, explosion, or chemical exposure) are not considered to be emergency responses.

"Exclusion zone" means the innermost zone at a site where contamination does occur.

"Facility" means:

Any building structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly-owned treatment works), well, pit, pond, lagoon, impoundment, ditch, storage container, motor vehicle, rolling stock, or aircraft; or

Any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any water-borne vessel.

"Hazardous substance" means any substance designated or listed under this definition, exposure to which results or may result in adverse effects on the health or safety of employees:

Any substance defined under section 101(14) of CERCLA;

Any biological agent and other disease-causing agent which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any person, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease,

behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such persons or their offspring;

WAC 296-62-30003 (Cont.)

Any substance listed by the United States Department of Transportation as hazardous materials under WAC 480-12-195; and

Hazardous waste as herein defined.

"**Hazardous waste"** means:

A waste or combination of wastes as defined as a **"health hazard."**

"Hazardous waste operation" means any operation conducted within the scope of this standard.

"Hazardous waste site" or **"site"** means any facility or location within the scope of this standard at which hazardous waste operations take place.

"Health hazard" means a chemical, mixture of chemicals, or a pathogen for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes. It also includes stress due to temperature extremes. Further definition of the terms used above can be found in Appendix A to chapter 296-62 WAC, Part C.

"IDLH" or **"immediately dangerous to life or health"** means any atmospheric concentration of any toxic, corrosive, or asphyxiant substance that poses an immediate threat to life or would cause irreversible or delayed adverse health effects or would interfere with an individual's ability to escape from a dangerous atmosphere.

"Oxygen deficiency" means that concentration of oxygen by volume below which atmosphere supplying respiratory protection must be provided. It exists in atmospheres where the percentage of oxygen by volume is less than 19.5 percent oxygen.

"Permissible exposure limit" means the exposure, inhalation, or dermal permissible limit specified in WAC 296-62-075 through 296-62-07515.

"Published exposure level" means the exposure limits published in "NIOSH Recommendations for Occupational Health Standards" dated 1986 incorporated by reference, or if none is specified, the exposure limits published in the standards specified by the American Conference of Governmental Industrial Hygienists in their publication "Threshold Limit Values and Biological Exposure Indices for 1988-89" dated 1988 incorporated by reference.

"Postemergency response" means that portion of an emergency response performed after the immediate threat of a release has been stabilized or eliminated and clean-up of the site has begun. If postemergency response is performed by an employer's own employees who were part of the initial emergency response, it is considered to be part of the initial response and not postemergency response. However, if a group of an employer's own employees, separate from the group providing initial response, performs the clean-up operation, then the separate group of employees would be considered to be performing postemergency response and subject to chapter 296-62 WAC, Part R.

"Qualified person" means a person with specific training, knowledge, and experience in the area for which the person has responsibility and the authority to control.

"Site safety and health supervisor (or official)" means the individual located on a hazardous waste site who is responsible to the employer and has the authority and knowledge necessary to implement the site safety and health plan and verify compliance with applicable safety and health requirements.

"Site work zones" means an exclusion zone, contamination reduction zone, and a clean zone established at a hazardous waste site before clean-up work begins to prevent or reduce the movement of contaminants from the site to uncontaminated areas and to control public, employee, and equipment exposure to hazardous substances.

WAC 296-62-30003 (Cont.)

The exclusion zone is the innermost of the zones and is where contamination does occur. The contamination reduction zone is the zone between the exclusion zone and the clean zone and serves as a transition and buffer between the contaminated and clean zone to further reduce the physical transfer of contaminating substances to the public, employees, and equipment. The clean zone is the outermost of the zones and is a noncontaminated or clean area. The level of contamination in these zones is not defined and some designated exclusion zones can have very little contamination directly affecting employees.

The contaminated reduction corridors are the designated areas within the contaminated reduction zone for the decontamination of personnel and equipment.

"Small quantity generator" means a generator of hazardous wastes who in any calendar month generates no more than 1000 kilograms (2205 pounds) of hazardous waste in that month.

"Uncontrolled hazardous waste site" means an area identified as an uncontrolled hazardous waste site by a governmental body, whether federal, state, local, or other where an accumulation of hazardous substances creates a threat to the health and safety of individuals or the environment or both. Some sites are found on public lands, such as those created by former municipal, county, or state landfills where illegal or poorly managed waste disposal has taken place. Other sites are found on private property, often belonging to generators or former generators of hazardous substance waste. Examples of such sites include, but are not limited to, surface impoundments, landfills, dumps, and tank or drum farms. Normal operations at TSD sites are not covered by this definition.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30003, filed 03/23/99, effective 06/23/99.}

WAC 296-62-3010 Overview of a written safety and health program.

Note: Safety and health programs developed and implemented to meet other federal, state, or local regulations are considered acceptable in meeting this requirement if they cover or are modified to cover the topics required in this section. An additional or separate safety and health program is not required by this section.

Employers must develop and implement a written safety and health program for their employees involved in hazardous waste operations. The program must be designed to identify, evaluate, and control safety and health hazards and provide for emergency response for hazardous waste operations.
[Statutory Authority: 99-07-097 (Order 98-38), § 296-62-3010, filed 03/23/99, effective 06/23/99. Statutory Authority: Chapter 49.17 RCW. 95-04-007, 296-62-3010, filed 1/18/95, effective 3/1/95; 89-21-018 (Order 89-10), 296-62-3010, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3010, filed 10/6/88, effective 11/7/88.]

WAC 296-62-30105 Elements of a safety and health program. The written safety and health program must include the following elements:

(1) An organizational structure;

(2) A comprehensive workplan;

(3) A site-specific safety and health plan which need not repeat the employer's standard operating procedures required in subsection (7) of this section;

(4) The safety and health training program;

(5) The medical surveillance program;

(6) The employer's standard operating procedures for safety and health; and

(7) Any necessary interface between general program and site specific activities.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30105, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30110 Safety considerations during the initial site excavation. Site excavations created during initial site preparation or during hazardous waste operations must be shored or sloped as appropriate to prevent accidental collapse in accordance with subpart N of chapter 296-155 WAC.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30110, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30115 Notifying contractors and subcontractors of procedures and hazards. An employer who retains contractor or subcontractor services for work in hazardous waste operations must inform those contractors, subcontractors, or their representatives of the site emergency response procedures and any potential fire, explosion, health, safety, or other hazards of the hazardous waste operation that have been identified by the employer, including those identified in the employer's information program.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30115, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30120 Availability of the safety and health program. The written safety and health program must be made available to any contractor or subcontractor or their representative who will be involved with the hazardous waste operation; to employees; to employee designated representatives; to WISHA personnel, and to personnel of other federal, state, or local agencies with regulatory authority over the site.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30120, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30125 Organizational structure of the site safety and health program.

(1) The organizational structure of the site safety and health program must establish the specific chain of command and specify the overall responsibilities of supervisors and employees. It must include at a minimum, the following elements:

(a) A general supervisor who has the responsibility and authority to direct all hazardous waste operations.

(b) A site safety and health supervisor who has the responsibility and authority to develop and implement the site safety and health plan and verify compliance.

(c) All other personnel needed for hazardous waste site operations and emergency response and their general functions and responsibilities.

(d) The lines of authority, responsibility, and communication.

(2) The organizational structure shall be reviewed and updated as necessary to reflect the current status of waste site operations.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30125, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30130 Comprehensive workplan of the site program. The comprehensive workplan must address the tasks and objectives of site operations and the logistics and resources required to reach those tasks and objectives. The comprehensive workplan must:

(1) Address anticipated clean-up activities as well as normal operating procedures which need not repeat the employers procedures available elsewhere.

(2) Define work tasks and objectives and identify the methods for accomplishing those tasks and objectives.

(3) Establish personnel requirements for implementing the plan.

(4) Provide for the implementation of the training required in WAC 296-62-3040.

(5) Provide for the implementation of the required informational programs required in WAC 296-62-3080.

(6) Provide for the implementation of the medical surveillance program described in WAC 296-62-3050 through 296-62-30535.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30130, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30135 Overview of a site-specific safety and health plan.

(1) A written site-specific safety and health plan, must be kept on site. It must address the safety and health hazards of each phase of site operation and include the requirements and procedures for employee protection.

(2) Elements of a site-specific safety and health plan. The site-specific safety and health plan must include the following elements:

(a) The names of key personnel and alternates responsible for site safety and health, including a site safety and health supervisor.

(b) A safety and health risk or hazard analysis for each site task and operation found in the workplan.

(c) Employee training assignments to assure compliance with WAC 296-62-3040 through 296-62-30465.

(d) Personal protective equipment to be used by employees for each of the site tasks and operations being conducted as required by the personal protective equipment program in WAC 296-62-30615.

(e) A medical surveillance program meeting the requirements in WAC 296-62-3050 through 296-62-30535.

(f) Frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used, including methods of maintenance and calibration of monitoring and sampling equipment to be used.

(g) Site control measures in WAC 296-62-3030 through 296-62-30315.

(h) Decontamination procedures in WAC 296-62-3100 through 296-62-31015.

(i) An emergency response plan meeting the requirements of chapter 296-62 WAC, Part R for safe and effective responses to emergencies, including the necessary PPE and other equipment.

(j) Confined space and permit-required confined space entry procedures as addressed in chapter 296-62 WAC, Part M.

(k) A spill containment program meeting the requirements of WAC 296-62-3090 through 296-62-30940.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30135, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30140 Preentry briefing of the site-specific safety and health plan. The site-specific safety and health plan must provide for preentry briefings to be held prior to initiating any site activity, and at such other times as necessary to ensure that employees are apprised of the site safety and health plan and that this plan is being followed. The information and data obtained from site characterization and analysis work required in WAC 296-62-3020 through 296-62-30235 must be used to prepare and update the site safety and health plan.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30140, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30145 Effectiveness of site safety and health plan. Inspections must be conducted by the site safety and health supervisor or, in the absence of that individual, another individual who is knowledgeable in occupational safety and health acting on behalf of the employer as necessary to determine the effectiveness of the site safety and health plan. Any deficiencies in the effectiveness of the site safety and health plan must be corrected by the employer.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30145, filed 03/23/99, effective 06/23/99.]

WAC 296-62-3020 Site characterization and analysis. Hazardous waste sites must be evaluated in accordance with this section to identify specific site hazards and to determine the appropriate safety and health control procedures needed to protect employees from the identified hazards.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3020, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30205 Preliminary evaluation. A preliminary evaluation of a site's characteristics must be performed prior to site entry by a qualified person in order to aid in the selection of appropriate employee protection methods prior to site entry. Immediately after initial site entry, a more detailed evaluation of the site's specific characteristics must be performed by a qualified person in order to further identify existing site hazards and to further aid in the selection of the appropriate engineering controls and personal protective equipment for the tasks to be performed.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30205, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30210 Hazard identification. All suspected conditions that may pose inhalation or skin absorption hazards that are immediately dangerous to life or health (IDLH), or other conditions that may cause death or serious harm, must be identified during the preliminary survey and evaluated during the detailed survey. Examples of such hazards include, but are not limited to, confined space entry, potentially explosive or flammable situations, visible vapor clouds, or areas where biological indicators such as dead animals or vegetation are located.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30210, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30215 Required information. The following information to the extent available must be obtained by the employer prior to allowing employees to enter a site:

(1) Location and approximate size of the site.

(2) Description of the response activity and/or the job task to be performed.

(3) Duration of the planned employee activity.

(4) Site topography and accessibility by air and roads.

(5) Safety and health hazards expected at the site.

(6) Pathways for hazardous substance dispersion.

(7) Present status and capabilities of emergency response teams that would provide assistance to hazardous waste clean-up site employees at the time of an emergency.

(8) Hazardous substances and health hazards involved or expected at the site and their chemical and physical properties.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30215, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30220 Personal protective equipment. Personal protective equipment (PPE) must be provided and used during initial site entry in accordance with the following requirements:

(1) Based upon the results of the preliminary site evaluation, an ensemble of PPE must be selected and used during initial site entry which will provide protection to a level of exposure below established permissible exposure limits and published exposure levels for known or suspected hazardous substances and health hazards, and which will provide protection against other known and suspected hazards identified during the preliminary site evaluation. If there is no permissible exposure limit or published exposure level, the employer may use other published studies and information as a guide to appropriate personal protective equipment. Level A and Level B personal protective equipment is required for the most hazardous actual or potential exposures.

(2) If positive-pressure self-contained breathing apparatus is not used as part of the entry ensemble, and if respiratory protection is warranted by the potential hazards identified during the preliminary site evaluation, an escape self-contained breathing apparatus of at least five minute's duration must be carried by employees during initial site entry.

WAC 296-62-30220 (Cont.)

(3) If the preliminary site evaluation does not produce sufficient information to identify the hazards or suspected hazards of the site an ensemble providing protection equivalent to Level B PPE must be provided as minimum protection and direct reading instruments must be used as appropriate for identifying IDLH conditions. (See WAC 296-62-3170 - Appendix B for a description of Level B hazards and the recommendations for Level B protective equipment.)

(4) Once the hazards of the site have been identified, the appropriate PPE must be selected and used in accordance with WAC 296-62-3060 through 296-62-30615.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30220, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30225 Monitoring. The following monitoring must be conducted during initial site entry when the site evaluation produces information that shows the potential for ionizing radiation or IDLH conditions, or when the site information is not sufficient to rule out these possible conditions:

(1) Monitoring with direct reading instruments for hazardous levels of ionizing radiation.

(2) Monitoring the air with appropriate direct reading equipment (i.e., combustible gas meters, detector tubes) for IDLH and other conditions that may cause death or serious harm (combustible or explosive atmospheres, oxygen deficiency, toxic substances).

(3) Visually observing for signs of actual or potential IDLH or other dangerous conditions.

(4) An ongoing air monitoring program in accordance with WAC 296-62-30710 and 296-62-30715 must be implemented after site characterization has determined the site is safe for the start-up of operations.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30225, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30230 Risk identification. Once the presence and concentrations of specific hazardous substances and health hazards have been established, the risks associated with these substances must be identified. Employees who will be working on the site must be informed of any risks that have been identified. In situations covered by WAC 296-800-170, training required by those standards need not be duplicated.

Note: Risks to consider include, but are not limited to:

(1) Exposures exceeding the permissible exposure limits and published exposure levels.

(2) IDLH concentrations.

(3) Potential skin absorption and irritation sources.

(4) Potential eye irritation sources.

(5) Explosion sensitivity and flammability ranges.

(6) Oxygen deficiency.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038, (Order 99-36), § 296-62-30230, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30230, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30235 Employee notification. Any information concerning the chemical, physical, and toxicologic properties of each substance known or expected to be present on site that is available to the employer and relevant to the duties an employee is expected to perform must be made available to all employees prior to the commencement of their work activities. The employer may use information developed for the chemical hazard communication standard, WAC 296-800-170, for this purpose.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038, (Order 99-36), § 296-62-30235, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30235, filed 03/23/99, effective 06/23/99.]

WAC 296-62-3030 Site control. Appropriate site control procedures must be implemented to control employee exposure to hazardous substances before clean-up work begins.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3030, filed 03/23/99, effective 06/23/99. Statutory Authority: Chapter 49.17 RCW. 89-21-018 (Order 89-10), 296-62-3030, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3030, filed 10/6/88, effective 11/7/88.]

WAC 296-62-30305 Site control program. A site control program for protecting employees which is part of the employer's site safety health program required in WAC 296-62-3010 through 296-62-30145 must be developed during the planning stages of a hazardous waste clean-up operation and modified as necessary as new information becomes available.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30305, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30310 Elements of the site control program. The site control program must, as a minimum, include: A site map; site work zones; the use of a "buddy system"; site communications including alerting means for emergencies; the standard operating procedures or safe work practices; and, identification of nearest medical assistance. Where these requirements are covered elsewhere they need not be repeated.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30310, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30315 Site work zones.

(1) The site work zones must be the exclusion zone, contamination reduction zone, and the clean zone.

(2) Decontamination procedures must take place in the contamination reduction corridor consisting, if practical, of separate corridors for personnel and for equipment.

(3) An entry an exit check point must be established at the boundary of the exclusion zone to regulate the flow of personnel and equipment into and out of the zone. Exit from the exclusion zone must be through a contamination reduction corridor.

(4) Access to the contamination reduction zone from the clean zone is through a control point. Personnel entering or working in the contamination zone must wear the prescribed personnel protective equipment, if required, for working in this zone. Entering the clean zone requires removal of any protective equipment worn in the contamination reduction zone.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30315, filed 03/23/99, effective 06/23/99.

WAC 296-62-3040 General training requirements and the employees covered.

(1) All employees working on site (such as but not limited to equipment operators, general laborers, and others) exposed to hazardous substances, health hazards, or safety hazards, and their supervisors and management responsible for the site, must receive training meeting the requirements of this subsection before they are permitted to engage in hazardous waste operations that could expose them to hazardous substances, safety, or health hazards, and they must review training as specified in this subsection.

(2) Employees must not be permitted to participate in or supervise field activities until they have been trained to a level required by their job function and responsibility.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3040, filed 03/23/99, effective 06/23/99.

WAC 296-62-30405 Elements covered in training. The training must thoroughly cover the following:

(1) Names of personnel and alternates responsible for site safety and health;

(2) Safety, health, and other hazards present on the site;

(3) Use of personal protective equipment;

(4) Work practices by which the employee can minimize risks from hazards;

WAC 296-62-30405 (Cont.)

(5) Safe use of engineering controls and equipment on the site;

(6) Medical surveillance requirements including recognition of symptoms and signs which might indicate overexposure to hazards; and

(7) The contents of the site safety and health plan set forth in WAC 296-62-31035 (2)(g) through (j).
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30405, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30410 Initial training. General site workers (such as equipment operators, general laborers, and supervisory personnel) engaged in hazardous substance removal or other activities which expose or potentially expose workers to hazardous substances and health hazards must receive the following required training:

(1) General site workers required to wear Level A or Level B personal protective equipment because of the types of hazards to which they are exposed or have the potential for being exposed are required to have 80 hours of training and a minimum of three days actual field experience under the direct supervision of a trained, experienced supervisor.

(2) General site workers required to wear Level C or D personal protective equipment, equipment operators or transport vehicle operators, are required to have 40 hours of training and a minimum of three days actual field experience under the direct supervision of a trained, experienced supervisor.

(3) General site workers on site only occasionally for specific limited tasks, and supervisors not working in the two inner zones are required to have 24 hours of training. For example, certain Environmental Protection Agency, and department of ecology employees, labor and industries inspectors and other short-term monitoring and surveying personnel would be required to only have 24 hours of training if they are on-site only occasionally for a specific limited task and are unlikely to be exposed over permissible exposure levels and published exposure limits. A minimum of one day actual field experience under direct supervision is also required.

(4) Workers regularly on site who work in areas which have been monitored and fully characterized indicating that exposures are under permissible exposure limits and published exposure limits where respirators are not necessary, and the characterization indicates that there are no health hazards or the possibility of an emergency developing, must receive a minimum of 24 hours of instruction off the site and the minimum of one day actual field experience under the direct supervision of a trained, experienced supervisor.

(5) Workers with 24 hours of training who are covered by subsections (3) and (4) of this section, and who become general site workers or who are required to wear respirators, must have the additional 16 hours and two days of training necessary to total the training specified in subsection (2) of this section.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30410, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30415 Management and supervisor training. On-site management and supervisors directly responsible for, or who supervise employees engaged in, hazardous waste operations must receive the same initial training as listed in WAC 296-62-30410, and three days of supervised field experience and at least eight additional hours of specialized training at the time of job assignment on such topics as, but not limited to, the employer's safety and health program and the associated employee training program, personal protective equipment program, spill containment program, and health hazard monitoring procedure and techniques.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30415, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30420 Law enforcement at illicit drug labs.

Exception: *WISHA did not intend application of the 80 hour training requirement to law enforcement personnel required to enter illicit drug labs, secure the premise, and obtain necessary evidence for law enforcement purposes. Attendance at a specific 40 hours course, such as that presented by the criminal justice training commission, is acceptable.*

WAC 296-62-30420 (Cont.)

Note: If clean-up activities are conducted by law enforcement personnel, then appropriate hazardous waste clean-up training would be required.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30420, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30425 Training course content for 40 and 80 hour hazardous waste clean-up courses. As a minimum, the training course content for the 40 hour and 80 hour training program must include the following topics:

(1) Overview of the applicable sections of Part P of chapter 296-62 WAC and the elements of an employer's effective occupational safety and health program.

(2) Effect of chemical exposure to hazardous substances (i.e., toxicity, carcinogens, irritants, sensitizers, etc.).

(3) Effects of biological and radiological exposures.

(4) Fire and explosion hazards (i.e., flammable and combustible liquids, reactive materials).

(5) General safety hazards, including electrical hazards, powered equipment hazards, walking-working surface hazards and those hazards associated with hot and cold temperature extremes.

(6) Permit-required confined space, tank, and vault hazards and entry procedures.

(7) Names of personnel and alternates, where appropriate, responsible for site safety and health at the site.

(8) Specific safety, health, and other hazards that are to be addressed at a site and in the site safety and health plan.

(9) Use of personal protective equipment and the implementation of the personal protective equipment program.

(10) Work practices that will minimize employee risk from site hazards.

(11) Safe use of engineering controls and equipment and any new relevant technology or procedure.

(12) Content of the medical surveillance program and requirements, including the recognition of signs and symptoms of overexposure to hazardous substances.

(13) The contents of an effective site safety and health plan.

(14) Use of monitoring equipment with “hands-on” experience and the implementation of the employee and site monitoring program.

(15) Implementation and use of the information program.

(16) Drum and container handling procedures and the elements of a spill containment program.

(17) Selection and use of material handling equipment.

(18) Methods for assessment of risk and handling of radioactive wastes.

(19) Methods for handling shock-sensitive wastes.

(20) Laboratory waste pack handling procedures.

(21) Container sampling procedures and safeguards.

(22) Safe preparation procedures for shipping and transport of containers.

WAC 296-62-30425 (Cont.)

(23) Decontamination program and procedures.

(24) Emergency response plan and procedures including first aid.

(25) Safe site illumination levels.

(26) Site sanitation procedures and equipment for employee needs.

(27) Review of the applicable appendices to Part P of chapter 296-62 WAC.

(28) Overview and explanation of WISHA's chemical hazard communication standard WAC 296-800-170.

(29) Sources of reference, additional information and efficient use of relevant manuals and hazard coding systems.

(30) Principles of toxicology and biological monitoring.

(31) Rights and responsibilities of employees and employers under WISHA and CERCLA.

(32) Hands-on field exercises and demonstrations.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038, (Order 99-36), § 296-62-30425, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30425, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30430 Training content for 24-hour hazardous waste clean-up course. As a minimum, the 24-hour training course required in WAC 296-62-30410 (3) and (4) for employees engaged in occasional visits to uncontrolled hazardous waste sites must include the following topics where they are applicable to the job function to be performed:

(1) Overview of applicable sections of Part P of chapter 296-62 WAC and the elements of the employer's effective occupational safety and health program.

(2) Employee rights and responsibilities under WISHA and CERCLA.

(3) Overview of relevant chemical exposures to hazardous substances (i.e., toxics, carcinogens, irritants, sensitizers, etc.).

(4) Overview of the principles of toxicology and biological monitoring.

(5) Use of monitoring equipment with hands-on practice and an overview of a site monitoring program.

(6) Overview of site hazards including fire and explosion, confined spaces, oxygen deficiency, electrical hazards, powered equipment hazards, walking-working surface hazards.

(7) The contents of an effective site safety and health plan.

(8) Use of personal protective equipment and the implementation of the personal protective equipment program.

(9) Work practices that will minimize employee risk from site hazards.

(10) Site simulations with “hands-on” exercises and practice.

(11) Emergency response planning and response including first aid.

(12) Content of the medical surveillance program and requirements, including the recognition of signs and symptoms of overexposure to hazardous substances.

(13) Decontamination programs and procedures.

WAC 296-62-30430 (Cont.)

(14) Safe use of engineering controls and equipment.

(15) Sources of references and efficient use of relevant manuals and knowledge of hazard coding systems.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30430, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30435 16-hour supplemental training for hazardous waste sites. As a minimum, employees who have received 24 hours of training for hazardous waste site operations must receive training in the following topics before they are allowed to work as general site workers or if they are required to wear respirators:

(1) Relevant chemical exposures to hazardous substances beyond that previously covered.

(2) Site hazards including fire and explosion, confined spaces, oxygen deficiency, electrical, powered equipment, and walking-working surfaces beyond that previously covered.

(3) Names of personnel and alternates responsible for site safety and health at the site, where appropriate.

(4) Use of monitoring equipment and the implementation of the employee and the site monitoring program beyond that previously covered.

(5) Implementation and use of the informational program.

(6) Drum and container handling procedures and the elements of a spill containment program.

(7) Selection and use of material handling equipment.

(8) Methods for assessment of risk and handling of radioactive wastes.

(9) Methods for handling shock-sensitive wastes.

(10) Laboratory waste pack handling procedures.

(11) Container sampling procedures and safeguards.

(12) Safe preparation procedures for shipping and transport of containers.

(13) Decontamination program and procedures.

(14) Safety site illumination levels.

(15) Site sanitation procedures and equipment.

(16) Review of the applicable appendices to Part P of chapter 296-62 WAC.

(17) Overview and explanation of WISHA's chemical hazard communication standard WAC 296-800-170.

(18) Sources of reference and additional information.
[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038, (Order 99-36), § 296-62-30435, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30435, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30440 Additional 8 hours of training for supervisors and managers. Supervisors and managers must receive an additional eight hours of training in the following subjects:

(1) Management of hazardous wastes and their disposal.

(2) Federal, state, and local agencies to be contacted in the event of a release of hazardous substances.

WAC 296-62-30440 (Cont.)

(3) Management of emergency procedures in the event of a release of hazardous substances.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30440, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30445 Qualifications for trainers. Trainers must be qualified to instruct employees about the subject matter that is being presented in training. Such trainers must have satisfactorily completed a training program for teaching the subjects they are expected to teach, or they must have the academic credentials and instructional experience necessary for teaching the subjects. Instructors must demonstrate competent instructional skills and knowledge of the applicable subject matter.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30445, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30450 Training certification. Employees and supervisors that have received and successfully completed the training and field experience specified in WAC 296-62-3040 through 296-62-30415 must be certified by their instructor or the head instructor and trained supervisor as having successfully completed the necessary training. A written certificate must be given to each person certified. Any person who has not been certified or who does not meet the requirements of WAC 296-62-30465 must be prohibited from engaging in hazardous waste operations.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30450, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30455 Training requirements for emergency response. Employees who are engaged in responding to hazardous emergency situations at hazardous waste clean-up sites that may expose them to hazardous substances must be trained in how to respond to expected emergencies.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30455, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30460 Refresher training. Employees specified in WAC 296-62-3040 and managers specified in WAC 296-62-30415 must receive eight hours of refresher training annually on the items specified in WAC 296-62-30405 and/or 296-62-30415, any critique of incidents that have occurred in the past year that can serve as training examples of related work, and other relevant topics.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30460, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30465 Equivalent training. Employers who can show by documentation or certification that an employee's work experience and/or training has resulted in training equivalent to that training required in WAC 296-62-3040 through 296-62-30410 must not be required to provide the initial training requirements of those sections to such employees and must provide a copy of the certification or documentation to the employee upon request. However, certified employees or employees with equivalent training new to a site must receive appropriate, site specific training before site entry and have appropriate supervised field experience at the new site. Equivalent training includes any academic training or the training that existing employees might have already received from actual hazardous waste site work experience. The 80 hours of instruction required can be fulfilled as follows:

(1) Instruction can include a combination of presently available 40 hour training sessions and other related classes or training including additional supervised on-the-job training as long as material covered includes elements required in the training section WAC 296-62-30405 of the regulations. A single 80 hour training session is also acceptable.

(2) Previously attended courses including eight-hour refresher courses apply toward the 80 hour requirement and need not be repeated.

(3) Documentation of previous experience and training by qualified trainers is required of employers and must be available to inspectors for review.

(4) When calculating hours of training, WISHA assumes a “normal” work day to be eight hours with sufficient time for lunch and other breaks.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30465, filed 03/23/99, effective 06/23/99.]

WAC 296-62-3050 Medical surveillance. Employers engaged in operations specified in WAC 296-62-300(1) and not covered by WAC 296-62-300(2), exceptions; must institute a medical surveillance program.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3050, filed 03/23/99, effective 06/23/99.] [Statutory Authority: Chapter 49.17 RCW. 91-11-070 (Order 91-01), 296-62-3050, filed 5/20/91, effective 6/20/91; 90-20-091 (Order 90-14), 296-62-3050, filed 10/1/90, effective 11/15/90; 89-21-018, 296-62-3050, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3050, filed 10/6/88, effective 11/7/88.]

WAC 296-62-30505 Employees covered. The medical surveillance program must be instituted for the following employees:

(1) All employees who are or may be exposed to hazardous substances or health hazards at or above the permissible exposure limits or, if there is no permissible exposure limit, above the published exposure levels for these substances, without regard to the use of respirators, for 30 days or more a year;

(2) All employees who wear a respirator for 30 days or more a year or as required by WAC 296-62-071; and

(3) All employees who are injured, become ill or develop signs or symptoms due to possible overexposure involving hazardous substances or health hazards from an emergency response or hazardous waste operation; and

(4) Members of HAZMAT teams.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30505, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30510 Frequency of medical examinations and consultations. Medical examinations and consultations shall be made available by the employer to each employee covered under WAC 296-62-3050 on the following schedules:

(1) For employees covered under WAC 296-62-30505 (1), (2), and (4):

(a) Prior to assignment;

(b) At least once every twelve months for each employee covered unless the attending physician believes a longer interval (not greater than biennially) is appropriate;

(c) At termination of employment or reassignment to an area where the employee would not be covered if the employee has not had an examination within the last six months;

(d) As soon as possible upon notification by an employee that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards, or that the employee has been injured or exposed above the permissible exposure limits, or published exposure levels in an emergency situation;

(e) At more frequent times, if the examining physician determines that an increased frequency of examination is medically necessary.

(2) For employees covered under WAC 296-62-30505 who may have been injured, received a health impairment, developed signs or symptoms which may have resulted from exposure to hazardous substances resulting from an emergency incident, or exposed during an emergency incident to hazardous substances at concentrations above the permissible exposure limits or the published exposure levels without the necessary personal protective equipment being used:

(a) As soon as possible following the emergency incident or development of signs or symptoms;

(b) At additional times, if the examining physician determines that follow-up examinations or consultations are medically necessary.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30510, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30515 Content of medical examinations and consultations.

(1) Medical examinations required by WAC 296-62-30510 must include a medical and work history (or updated history if one is in the employee's file) with special emphasis on symptoms related to the handling of hazardous substances and health hazards, and to fitness for duty including the ability to wear any required PPE under conditions (i.e., temperature extremes) that may be expected at the worksite.

(2) The content of medical examinations or consultations made available to employees under this section must be determined by the examining physician. The guidelines in the *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities* (See Appendix D, Reference #9) should be consulted.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30515, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30520 Examination by a physician and costs. All medical examinations and procedures must be performed by or under the supervision of a licensed physician, preferably one knowledgeable in occupational medicine, and must be provided without cost to the employee, without loss of pay, and at a reasonable time and place.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30520, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30525 Information provided to the physician. The employer must provide one copy of this standard and its appendices to the examining physician, and the following for each employee:

(1) A description of the employee's duties as they relate to the employee's exposures;

(2) The employee's exposure levels or anticipated exposure levels;

(3) A description of any personal protective equipment used or to be used;

(4) Information from previous medical examinations of the employee which is not readily available to the examining physician; and

(5) Information required in WAC 296-62-071 through 296-62-07121.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30525, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30530 Physician's written opinion.

(1) The employer must obtain and furnish the employee with a copy of a written opinion from the examining physician containing the following:

(a) The physician's opinion as to whether the employee has any detected medical conditions which would place the employee at increased risk of material impairment of the employee's health from work in hazardous waste operations or emergency response or from respirators use.

(b) The physician's recommended limitations upon the employees assigned work.

(c) The results of the medical examination and tests if requested by the employee.

(d) A statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions which require further examination or treatment.

(2) The written opinion obtained by the employer must not reveal specific findings or diagnoses unrelated to occupational exposures.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30530, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30535 Recordkeeping of medical surveillance activities.

(1) An accurate record of the medical surveillance required by this section must be retained. This record must be retained for the period specified and meet the criteria of Part B of chapter 296-62 WAC.

(2) The record required in subsection (1) of this section must include at least the following information:

WAC 296-62-30535 (Cont.)

(a) The name and Social Security number of the employee;

(b) Physicians' written opinions, recommended limitations, and results of examinations and tests;

(c) Any employee medical complaints related to exposure to hazardous substances;

(d) A copy of the information provided to the examining physician by the employer, with the exception of the standard and its appendices.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30535, filed 03/23/99, effective 06/23/99.]

WAC 296-62-3060 Engineering controls, work practices, and personal protective equipment for employee protection.

(1) Engineering controls, work practices, personal protective equipment, or a combination of these must be implemented in accordance with this section to protect employees from exposure to hazardous substances and health hazards.

(a) Engineering controls, work practices, and PPE for substances regulated in chapter 296-62 WAC.

Engineering controls and work practices must be instituted to reduce and maintain employee exposure to or below the permissible exposure limits for substances regulated by this chapter, except to the extent that such controls and practices are not feasible.

Note: Engineering controls which may be feasible include the use of pressurized cabs or control booths on equipment, and/or the use of remotely operated material handling equipment. Work practices which may be feasible are removing all nonessential employees from potential exposure during opening of drums, wetting down dusty operations, and locating employees upwind of possible hazards.

(b) Whenever engineering controls and work practices are not feasible, or not required, any reasonable combination of engineering controls, work practices, and PPE must be used to reduce and maintain exposures to or below the permissible exposure limits or dose limits for substances regulated by chapter 296-62 WAC.

(c) The employer must not implement a schedule of employee rotation as a means of compliance with permissible exposure limits or dose limits except when there is no other feasible way of complying with the airborne or dermal dose limits for ionizing radiation.

(d) The provisions of WAC 296-62-080 through 296-62-09013, 296-62-09015 through 296-62-09055, and 296-62-100 through 296-62-130 must be followed.

(2) Engineering controls, work practices, and personal protective equipment for substances not regulated in chapter 296-62 WAC. An appropriate combination of engineering controls, work practices, and personal protective equipment shall be used to reduce and maintain employee exposure to or below published exposure levels for hazardous substances and health hazards not regulated by chapter 296-62 WAC. The employer may use the published literature and MSDS as a guide in making the employer's determination as to what level of protection the employer believes is appropriate for hazardous substances and health hazards for which there is no permissible exposure limit or published exposure level.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3060, filed 03/23/99, effective 06/23/99.] Statutory Authority: Chapter 49.17 RCW. 94-15-096 (Order 94-07), 296-62-3060, filed 7/20/94, effective 9/20/94; 90-20-091 (Order 90-14), 296-62-3060, filed 10/1/90, effective 11/15/90; 89-21-018, 296-62-3060, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3060, filed 10/6/88, effective 11/7/88.]

WAC 296-62-30605 Personal protective equipment selection.

(1) Personal protective equipment (PPE) must be selected and used which will protect employees from the hazards and potential hazards they are likely to encounter as identified during the site characterization and analysis.

(2) Personal protective equipment selection must be based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the site, the task-specific conditions and duration, and the hazards and potential hazards identified at the site.

(3) Positive pressure self-contained breathing apparatus, or positive pressure air-line respirators equipped with an escape air supply must be used when chemical exposure levels present will create a substantial possibility of immediate death, immediate serious illness or injury, or impair the ability to escape.

(4) Totally encapsulating chemical protective suits (protection equivalent to Level A protection as recommended in Appendix B) must be used in conditions where skin absorbtion of a hazardous substance may result in a substantial possibility of immediate death, immediate serious illness or injury, or impair the ability to escape.

(5) The level of protection provided by PPE selection must be increased when additional information or site conditions indicate that increased protection is necessary to reduce employee exposures below permissible exposure limits and published exposure levels for hazardous substances and health hazards. (See WAC 296-62-3170 - Appendix B for guidance on selecting PPE ensembles.)

Note: The level of employee protection provided may be decreased when additional information or site conditions show that decreased protection will not result in increased hazardous exposures to employees.

(6) Personal protective equipment must be selected and used to meet the requirements of WAC 296-800-160, and additional requirements specified in this part.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038, (Order 99-36), § 296-62-30605, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30605, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30610 Totally encapsulating chemical protective suits.

(1) Totally encapsulating suits must protect employees from the particular hazards which are identified during site characterization and analysis.

(2) Totally encapsulating suits must be capable of maintaining positive air pressure. (See WAC 296-62-3160 - Appendix A for a test method which may be used to evaluate this requirement.)

(3) Totally encapsulating suits must be capable of preventing inward test gas leakage of more than 0.5 percent. (See WAC 296-62-3160 - Appendix A for a test method which may be used to evaluate this requirement.)

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30610, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30615 Personal protective equipment (PPE) program. A written personal protective equipment program, which is part of the employer's safety and health program required in WAC 296-62-3010 or 296-62-31405 and which must be part of the site-specific safety and health plan must be established. The PPE program must address the elements listed below. When elements, such as donning and doffing procedures, are provided by the manufacturer of a piece of equipment and are attached to the plan, they need not be rewritten into the plan as long as they adequately address the procedure or element.

(1) PPE selection based on site hazards;

(2) PPE use and limitations of the equipment;

(3) Work mission duration;

(4) PPE maintenance and storage;

WAC 296-62-30615 (Cont.)

(5) PPE decontamination and disposal;

(6) PPE training and proper fitting;

(7) PPE donning and doffing procedures;

(8) PPE inspection procedures prior to, during, and after use;

(9) Evaluation of the effectiveness of the PPE program; and

(10) Limitations during temperature extremes, heat stress, and other appropriate medical considerations.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30615, filed 03/23/99, effective 06/23/99.]

WAC 296-62-3070 Monitoring concentrations of hazardous substances.

(1) Monitoring must be performed in accordance with this section where there may be a question of employee exposure to concentrations of hazardous substances in order to assure proper selection of engineering controls, work practices, and personal protective equipment so that employees are not exposed to levels which exceed permissible exposure limits or published exposure levels if there are no permissible exposure limits, for hazardous substances.

(2) Air monitoring must be used to identify and quantify airborne levels of hazardous substances and safety and health hazards in order to determine the appropriate level of employee protection needed on site.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3070, filed 03/23/99, effective 06/23/99. Statutory Authority: Chapter 49.17 RCW. 90-20-091 (Order 90-14), 296-62-3070, filed 10/1/90, effective 11/15/90; 89-21-018, 296-62-3070, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3070, filed 10/6/88, effective 11/7/88.]

WAC 296-62-30705 Monitoring during initial entry. Upon initial entry, representative air monitoring must be conducted to identify any IDLH condition, exposure over permissible exposure limits or published exposure levels, exposure over a radioactive material's dose limits, or other dangerous condition, such as the presence of flammable atmospheres or oxygen-deficient environments.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30705, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30710 Periodic monitoring. Periodic monitoring must be conducted when the possibility of an IDLH condition or flammable atmosphere has developed or when there is indication that exposures may have risen over permissible exposure limits or published exposure levels since prior monitoring. Situations where it must be considered whether the possibility that exposures have risen are as follows:

(1) When work begins on a different portion of the site.

(2) When contaminants other than those previously identified are being handled.

(3) When a different type of operation is initiated (e.g., drum opening as opposed to exploratory well drilling).

(4) When employees are handling leaking drums or containers or working in areas with obvious liquid contamination (e.g., a spill or lagoon).

(5) When a sufficient reasonable interval has passed so that exposures may have significantly increased.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30710, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30715 Monitoring of high-risk employees. After the actual clean-up phase of any hazardous waste operation commences; for example, when soil, surface water, or containers are moved or disturbed; the employer must monitor those employees likely to have the highest exposures to hazardous substances and health hazards likely to be present above permissible exposure limits or published exposure levels by using personal sampling frequently

WAC 296-62-30715 (Cont.)

enough to characterize employee exposures. If the employees likely to have the highest exposure are over permissible exposure limits or published exposure levels, then monitoring must continue to determine all employees likely to be above those limits. The employer may use a representative sampling approach by documenting that the employees and chemicals chosen for monitoring are based on the criteria stated in this subsection.

Note: It is not required to monitor employees engaged in site characterization operations covered by WAC 296-62-3020 through 296-62-30235.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30715, filed 03/23/99, effective 06/23/99.]

WAC 296-62-3080 Informational programs. Employers must develop and implement a program which is part of the employer's safety and health program required in WAC 296-62-3010 through 296-62-30145 to inform employees, contractors, and subcontractors (or their representative) actually engaged in hazardous waste operations of the nature, level, and degree of exposure likely as a result of participation in such hazardous waste operations. Employees, contractors, and subcontractors working outside of the operations part of a site are not covered by this standard.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3080, filed 03/23/99, effective 06/23/99.] Statutory Authority: Chapter 49.17 RCW. 89-21-018, 296-62-3080, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3080, filed 10/6/88, effective 11/7/88.]

WAC 296-62-3090 Handling drums and containers.

(1) Hazardous substances and contaminated soils, liquids, and other residues must be handled, transported, labeled, and disposed of in accordance with this section.

(2) Drums and containers used during the clean-up must meet the appropriate DOT, OSHA, WISHA, and EPA regulations for the wastes that they contain.

(3) When practical, drums and containers must be inspected and their integrity must be assured prior to being moved. Drums or containers that cannot be inspected before being moved because of storage conditions (i.e., buried beneath the earth, stacked behind other drums, stacked several tiers high in a pile, etc.) must be moved to an accessible location and inspected prior to further handling.

(4) Unlabeled drums and containers must be considered to contain hazardous substances and handled accordingly until the contents are positively identified and labeled.

(5) Site operations must be organized to minimize the amount of drum or container movement.

(6) Prior to movement of drums or containers, all employees exposed to the transfer operation must be warned of the potential hazards associated with the contents of the drums or containers.

(7) United States Department of Transportation specified salvage drums or containers and suitable quantities of proper absorbent must be kept available and used in areas where spills, leaks, or ruptures may occur.

(8) Where major spills may occur, a spill containment program, which is part of the employer's safety and health program required in WAC 296-62-3010, must be implemented to contain and isolate the entire volume of the hazardous substance being transferred.

(9) Drums and containers that cannot be moved without rupture, leakage, or spillage must be emptied into a sound container using a device classified for the material being transferred.

(10) A ground-penetrating system or other type of detection system or device must be used to estimate the location and depth of buried drums or containers.

(11) Soil or covering material must be removed with caution to prevent drum or container rupture.

WAC 296-62-3090 (Cont.)

(12) Fire extinguishing equipment meeting the requirements of WAC 296-800-300 must be on hand and ready for use to control incipient fires.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038, (Order 99-36), § 296-62-3090, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3090, filed 03/23/99, effective 06/23/99.] [Statutory Authority: Chapter 49.17 RCW. 93-19-142 (Order 93-04), 296-62-3090, filed 9/22/93, effective 11/1/93; 91-11-070 (Order 91-01), 296-62-3090, filed 5/20/91, effective 6/20/91; 89-21-018, 296-62-3090, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3090, filed 10/6/88, effective 11/7/88.]

WAC 296-62-30905 Opening drums and containers. The following procedures must be followed in areas where drums or containers are being opened:

(1) Where an airline respirator system is used, connections to the source of air supply must be protected from contamination and the entire system must be protected from physical damage.

(2) Employees not actually involved in opening drums or containers must be kept a safe distance from the drums or containers being opened.

(3) If employees must work near or adjacent to drums or containers being opened, a suitable shield that does not interfere with the work operation must be placed between the employee and the drums or containers being opened to protect the employee in case of accidental explosion.

(4) Controls for drum or container opening equipment, monitoring equipment, and fire suppression equipment must be located behind the explosion-resistant barrier.

(5) When there is a reasonable possibility of flammable atmospheres being present, material handling equipment and hand tools must be of the type to prevent sources of ignition.

(6) Drums and containers must be opened in such a manner that excess interior pressure will be safely relieved. If pressure cannot be relieved from a remote location, appropriate shielding must be placed between the employee and the drums or containers to reduce the risk of employee injury.

(7) Employees must not stand upon or work from drums or containers.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30905, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30910 Material handling equipment. Material handling equipment used to transfer drums and containers must be selected, positioned, and operated to minimize sources of ignition related to the equipment from igniting vapors released from ruptured drums or containers.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30910, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30915 Radioactive wastes. Drums and containers containing radioactive wastes must not be handled until such time as their hazard to employees is properly assessed.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30915, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30920 Shock-sensitive wastes. As a minimum, the following special precautions must be taken when drums and containers containing or suspected of containing shock-sensitive wastes are handled:

(1) All nonessential employees must be evacuated from the area of transfer.

(2) Material handling equipment must be provided with explosive containment devices or protective shields to protect equipment operators from exploding containers.

(3) An employee alarm system capable of being perceived above surrounding light and noise conditions must be used to signal the commencement and completion of explosive waste handling activities.

(4) Continuous communications (i.e., portable radios, hand signals, telephones, as appropriate) must be maintained between the employee-in-charge of the immediate handling area and the site safety and health supervisor and

command post until such time as the handling operation is completed. Communication equipment or methods that could cause shock-sensitive materials to explode must not be used.

WAC 296-62-30920 (Cont.)

(5) Drums and containers under pressure, as evidenced by bulging or swelling, must not be moved until such time as the cause for excess pressure is determined and appropriate containment procedures have been implemented to protect employees from explosive relief of the drum.

(6) Drums and containers containing packaged laboratory wastes must be considered to contain shock-sensitive or explosive materials until they have been characterized.

Caution: Shipping of shock-sensitive wastes may be prohibited under United States Department of Transportation regulations. Employers and their shippers should refer to WAC 480-12-195.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30920, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30925 Laboratory waste packs. In addition to the requirements of WAC 296-62-30915, the following precautions must be taken, as a minimum, in handling laboratory waste packs (lab packs):

(1) Lab packs must be opened only when necessary and then only by an individual knowledgeable in the inspection, classification, and segregation of the containers within the pack according to the hazards of the wastes.

(2) If crystalline material is noted on any container, the contents must be handled as a shock-sensitive waste until the contents are identified.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30925, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30930 Sampling of drum and container contents. Sampling of containers and drums must be done in accordance with a sampling procedure which is part of the site safety and health plan developed for and available to employees and others at the specific worksite.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30930, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30935 Shipping and transport of drums.

(1) Drums and containers must be identified and classified prior to packaging for shipment.

(2) Drum or container staging areas must be kept to the minimum number necessary to identify and classify materials safely and prepare them for transport.

(3) Staging areas must be provided with adequate access and egress routes.

(4) Bulking of hazardous wastes must be permitted only after a thorough characterization of the materials has been completed.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30935, filed 03/23/99, effective 06/23/99.]

WAC 296-62-30940 Tanks and vaults procedures.

(1) Tanks and vaults containing hazardous substances must be handled in a manner similar to that for drums and containers, taking into consideration the size of the tank or vault.

(2) Appropriate tank or vault entry procedures as described in chapter 296-62 WAC, Part M and the employer's safety and health plan must be followed whenever employees must enter a tank or vault.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-30940, filed 03/23/99, effective 06/23/99.]

WAC 296-62-3100 Decontamination procedures.

(1) **General.** Procedures for all phases of decontamination must be developed according to WAC 296-62-3100 through 296-62-31015.

(2) **Decontamination procedures.**

WAC 296-62-3100 (Cont.)

(a) A decontamination procedure must be developed, communicated to employees and implemented before any employees or equipment may enter areas on site where potential for exposure to hazardous substances exists.

(b) Standard operating procedures must be developed to minimize employee contact with hazardous substances or with equipment that has contacted hazardous substances.

(c) All employees leaving a contaminated area must be appropriately decontaminated; all contaminated clothing and equipment leaving a contaminated area must be appropriately disposed of or decontaminated.

(d) Decontamination procedures must be monitored by the site safety and health supervisor to determine their effectiveness. When such procedures are found to be ineffective, appropriate steps must be taken to correct any deficiencies.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3100, filed 03/23/99, effective 06/23/99. Statutory Authority: Chapter 49.17 RCW. 89-21-018, 296-62-3100, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3100, filed 10/6/88, effective 11/7/88.]

WAC 296-62-31005 Location of decontamination areas. Decontamination must be performed in geographical areas that will minimize the exposure of uncontaminated employees or equipment to contaminated employees or equipment.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31005, filed 03/23/99, effective 06/23/99.]

WAC 296-62-31010 Decontamination of equipment and solvents. All equipment and solvents used for decontamination must be decontaminated or disposed of properly.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31010, filed 03/23/99, effective 06/23/99.]

WAC 296-62-31015 Decontamination of personal protective clothing and equipment.

(1) Protective clothing and equipment must be decontaminated, cleaned, laundered, maintained, or replaced as needed to maintain their effectiveness.

(2) Employees whose nonimpermeable clothing becomes wetted with hazardous substances must immediately remove that clothing and proceed to shower. The clothing must be disposed of or decontaminated before it is removed from the work zone.

(3) Unauthorized employees. Unauthorized employees must not remove protective clothing or equipment from change rooms.

(4) Commercial laundries or cleaning establishments. Commercial laundries or cleaning establishments that decontaminate protective clothing or equipment must be informed of the potentially harmful effects of exposures to hazardous substances.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31015, filed 03/23/99, effective 06/23/99.]

WAC 296-62-31020 Showers and change rooms used for decontamination. Where the decontamination procedure indicates a need for regular showers and change rooms outside of a contaminated area, they must be provided and meet the requirements of Part B-1 of chapter 296-24 WAC. If temperature conditions prevent the effective use of water, then other effective means for cleansing must be provided and used.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31020, filed 03/23/99, effective 06/23/99.]

WAC 296-62-3110 Emergency response by employees at uncontrolled hazardous waste sites.

(1) An emergency response plan must be developed and implemented by all employers within the scope of WAC 296-62-30001 (1)(a) and (b) to handle anticipated emergencies prior to the commencement of hazardous waste operations. The plan must be in writing and available for inspection and copying by

employees, their representatives, WISHA personnel, and other governmental agencies with relevant responsibilities.

WAC 296-62-3110 (Cont.)

(2) Employers who will evacuate their employees from the danger area when an emergency occurs, and who do not permit any of their employees to assist in handling the emergency are exempt from the requirements of this section if they provide an emergency action plan complying with WAC 296-24-567(1).

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3110, filed 03/23/99, effective 06/23/99. Statutory Authority: Chapter 49.17 RCW. 90-20-091 (Order 90-14), 296-62-3110, filed 10/1/90, effective 11/15/90; 90-09-026 (Order 90-01), 296-62-3110, filed 4/10/90, effective 5/25/90; 89-21-018 (Order 89-10), 296-62-3110, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3110, filed 10/6/88, effective 11/7/88.]

WAC 296-62-31105 Elements of an emergency response plan at uncontrolled hazardous waste sites.

The employer must develop an emergency response plan for emergencies which must address as a minimum, the following:

(1) Preemergency planning.

(2) Personnel roles, lines of authority, and communication.

(3) Emergency recognition and prevention.

(4) Safe distances and places of refuge.

(5) Site security and control.

(6) Evacuation routes and procedures.

(7) Decontamination procedures which are not covered by the site safety and health plan.

(8) Emergency medical treatment and first aid.

(9) Emergency alerting and response procedures.

(10) Critique of response and follow-up.

(11) PPE and emergency equipment.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31105, filed 03/23/99, effective 06/23/99.]

WAC 296-62-31110 Procedures for handling emergency incidents at uncontrolled hazardous waste sites.

(1) In addition to the elements for the emergency response plan required in WAC 296-62-31105, the following elements must be included for emergency response plans:

(a) Site topography, layout, and prevailing weather conditions.

(b) Procedures for reporting incidents to local, state, and federal governmental agencies.

(2) The emergency response plan must be a separate section of the site safety and health plan.

(3) The emergency response plan must be compatible and integrated with the disaster, fire and/or emergency response plans of local, state, and federal agencies.

(4) The emergency response plan must be rehearsed regularly as part of the overall training program for site operations.

WAC 296-62-31110 (Cont.)

(5) The site emergency response plan must be reviewed periodically and, as necessary, be amended to keep it current with new or changing site conditions or information.

(6) An employee alarm system must be installed in accordance with WAC 296-24-631 through 296-24-63199 to notify employees of an on-site emergency situation, to stop work activities if necessary, to lower background noise in order to speed communication, and to begin emergency procedures.

(7) Based upon the information available at the time of the emergency, the employer must evaluate the incident and the site response capabilities and proceed with the appropriate steps to implement the on-site emergency response plan.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31110, filed 03/23/99, effective 06/23/99.

WAC 296-62-3120 Illumination. Areas accessible to employees must be lighted to not less than the minimum illumination intensities listed in Table 1 while any work is in progress:

TABLE 1 - 120.1--MINIMUM ILLUMINATION
Intensities in Foot-Candles

Foot-Candles	Area of Operation
5	General site area.
3	Excavation and waste areas, accessways , active storage areas, loading platforms, refueling and field maintenance areas.
5	Indoors: Warehouses, corridors, hallways, and exitways.
5	Tunnels, shafts, and general underground work areas; exception: Minimum of ten foot-candles is required at tunnel and shaft heading during drilling, mucking, and scaling. Mine Safety and Health Administration and the National Institute for Occupational Safety and Health approved cap lights shall be acceptable for use in the tunnel heading.
10	General shops (e.g., mechanical and electrical equipment rooms, active storerooms, barracks or living quarters, locker or dressing rooms, dining areas, and indoor toilets and workrooms).
30	First aid stations, infirmaries, and offices.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3120, filed 03/23/99, effective 06/23/99. Statutory Authority: Chapter 49.17 RCW. 94-15-096 (Order 94-07), 296-62-3120, filed 7/20/94, effective 9/20/94; 89-21-018, 296-62-3120, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3120, filed 10/6/88, effective 11/7/88.]

WAC 296-62-3130 Sanitation at temporary workplaces.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3130, filed 03/23/99, effective 06/23/99.

WAC 296-62-31305 Potable water.

(1) An adequate supply of potable water must be provided on the site.

(2) Portable containers used to dispense drinking water must be capable of being tightly closed, and equipped with a tap. Water must not be dipped from containers.

(3) Any container used to distribute drinking water must be clearly marked as to the nature of its contents and not used for any other purpose.

(4) Where single service cups (to be used but once) are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the used cups must be provided.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31305, filed 03/23/99, effective 06/23/99.

WAC 296-62-31310 Nonpotable water.

(1) Outlets for nonpotable water, such as water for fire fighting purposes must be identified to indicate clearly that the water is unsafe and is not to be used for drinking, washing, or cooking purposes.

(2) There must be no cross-connection, open or potential, between a system furnishing potable water and a system furnishing nonpotable water.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31310, filed 03/23/99, effective 06/23/99.

WAC 296-62-31315 Toilet facilities.

(1) Toilets must be provided for employees according to Table 2.

TABLE 2--TOILET FACILITIES

Number of Employees	Minimum Number of Facilities
20 or fewer	One.
More than 20, fewer than 200	One toilet seat and one urinal per 40 employees.
More than 200	One toilet seat and one urinal per 50 employees.

(2) Under temporary field conditions, provisions must be made to assure that at least one toilet facility is available.

(3) Hazardous waste sites, not provided with a sanitary sewer must be provided with the following toilet facilities unless prohibited by local codes:

(a) Chemical toilets;

(b) Recirculating toilets;

(c) Combustion toilets; or

(d) Flush toilets.

(4) The requirements for this section for sanitation facilities must not apply to mobile crews having transportation readily available to nearby toilet facilities.

(5) Doors entering toilet facilities must be provided with entrance locks controlled from inside the facility.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31315, filed 03/23/99, effective 06/23/99.

WAC 296-62-31320 Food handling. All food service facilities and operations for employees must meet the applicable laws, ordinances, and regulations of the jurisdictions in which they are located.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31320, filed 03/23/99, effective 06/23/99.

WAC 296-62-31325 Temporary sleeping quarters. When temporary sleeping quarters are provided, they must be heated, ventilated, and lighted.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31325, filed 03/23/99, effective 06/23/99.

WAC 296-62-31330 Washing facilities. The employer must provide adequate washing facilities for employees engaged in operations where hazardous substances may be harmful to employees. Such facilities must be in near proximity to the worksite, in areas where exposures are below permissible exposure limits and published exposure levels and which are under the controls of the employer, and must be so equipped as to enable employees to remove hazardous substances from themselves.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31330, filed 03/23/99, effective 06/23/99.

WAC 296-62-31335 Showers and change rooms. When hazardous waste clean-up or removal operations commence on a site and the duration of the work will require six months or greater time to complete, the employer must provide showers and change rooms for all employees exposed to hazardous substances and health hazards involved in hazardous waste clean-up or removal operations.

(1) Showers must be provided and must meet the requirements of WAC 296-24-12010(2) Change rooms must be provided and must meet the requirements of WAC 296-24-12011. Change rooms must consist of two separate change areas separated by the shower area required in (1) of this subsection. One change area, with an exit leading off the worksite, must provide employees with a clean area where they can remove, store, and put on street clothing. The second area, with an exit to the worksite, must provide employees with an area where they can put on, remove and store work clothing and personal protective equipment.

(3) Showers and change rooms must be located in areas where exposures are below the permissible exposure limits and published exposure levels. If this cannot be accomplished, then a ventilation system must be provided that will supply air that is below the permissible exposure limits and published exposure levels.

(4) Employers must assure that employees shower at the end of their work shift and when leaving the hazardous waste site.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31335, filed 03/23/99, effective 06/23/99.

WAC 296-62-3138 New technology programs.

(1) The employer must develop and implement procedures for the introduction of effective new technologies and equipment developed for the improved protection of employees working with hazardous waste clean-up operations, and the same must be implemented as part of the site safety and health program to assure that employee protection is being maintained.

(2) New technologies, equipment or control measures available to the industry, such as the use of foams, absorbents, adsorbents, neutralizers, or other means to suppress the level of air contaminants while excavating the site or for spill control, must be evaluated by employers or their representatives. Such an evaluation must be done to determine the effectiveness of the new methods, materials, or equipment before implementing their use on a large scale for enhancing employee protection. Information and data from manufacturers or suppliers may be used as part of the employer's evaluation effort. Such evaluations must be made available to WISHA upon request.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3138, filed 03/23/99, effective 06/23/99. Statutory Authority: Chapter 49.17 RCW. 89-21-018, 296-62-3138, filed 10/10/89, effective 11/24/89.]

WAC 296-62-3140 Certain operations conducted under the Resource Conservation and Recovery Act of 1976 (RCRA). Employers conducting operations at treatment, storage, and disposal (TSD) facilities specified in WAC 296-62-30001 (1)(d) must provide and implement the programs specified in WAC 296-62-3140 through 296-62-31470. See the "Notes and Exceptions" of WAC 296-62-30001 (2)(c) for employers not covered.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3140, filed 03/23/99, effective 06/23/99. Statutory Authority: Chapter 49.17 RCW. 94-16-145, 296-62-3140, filed 8/3/94, effective 9/12/94; 91-24-017 (Order 91-07), 296-62-3140, filed 11/22/91, effective 12/24/91; 90-20-091 (Order 90-14), 296-62-3140, filed 10/1/90, effective 11/15/90; 89-21-018, 296-62-3140, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3140, filed 10/6/88, effective 11/7/88.]

WAC 296-62-31405 Safety and health program under RCRA. The employer must develop and implement a written safety and health program for employees involved in hazardous waste operations that must be available for inspection by employees, their representatives and WISHA personnel. The program shall be designed to identify, evaluate and control safety and health hazards in their facilities for the purpose of employee protection, to provide for emergency response meeting the requirements of WAC 296-62-3110 and to address as appropriate site analysis, engineering controls, maximum exposure limits, hazardous waste handling procedures and uses of new technologies.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31405, filed 03/23/99, effective 06/23/99.

WAC 296-62-31410 Hazard communication program requirements under RCRA. The employer must implement a hazard communication program meeting the requirements of WAC 296-800-170, as part of the employer's safety and health program.

WAC 296-62-31410 (Cont.)

Note: The exemption for hazardous waste provided in WAC 296-800-170 is applicable to this section.
[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038, (Order 99-36), § 296-62-31410, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31410, filed 03/23/99, effective 06/23/99.]

WAC 296-62-31415 Medical surveillance program requirements under RCRA. The employer must develop and implement a medical surveillance program meeting the requirements of WAC 296-62-3050.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31415, filed 03/23/99, effective 06/23/99.

WAC 296-62-31420 Decontamination program requirements under RCRA. The employer must develop and implement a decontamination procedure meeting the requirements of WAC 296-62-3100 through 296-62-31015.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31420, filed 03/23/99, effective 06/23/99.

WAC 296-62-31425 New technology programs requirements under RCRA. The employer must develop and implement procedures meeting the requirements of WAC 296-62-3138 for introducing new and innovative equipment into the workplace.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31425, filed 03/23/99, effective 06/23/99.

WAC 296-62-31430 Material handling program requirements under RCRA. Where employees will be handling drums or containers, the employer must develop and implement procedures meeting the requirements of WAC 296-62-3090 (2) through (8), as well as WAC 296-62-30910 and 296-62-30935, prior to starting such work.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31430, filed 03/23/99, effective 06/23/99.

WAC296-62-31435 Training program for new employees under RCRA. The employer must develop and implement a training program, which is part of the employer's safety and health program, for employees exposed to health hazards or hazardous substances at TSD operations to enable the employees to perform their assigned duties and functions in a safe and healthful manner so as not to endanger themselves or other employees. The initial training must be for 24 hours and refresher training must be for eight hours annually. Employees who have received the initial training required by this section shall be given a written certificate attesting that they have successfully completed the necessary training.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31435, filed 03/23/99, effective 06/23/99.

WAC 296-62-31440 Training program for current employees. Employers who can show by an employee's previous work experience and/or training that the employee has had training equivalent to the initial training required by this section, must be considered as meeting the initial training requirements of this section as to that employee. Equivalent training includes the training that existing employees might have already received from actual site work experience. Current employees must receive eight hours of refresher training annually.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31440, filed 03/23/99, effective 06/23/99.

WAC 296-62-31445 RCRA requirements for trainers. Trainers who teach initial training must have satisfactorily completed a training course for teaching the subjects they are expected to teach or they must have the academic credentials and instruction experience necessary to demonstrate a good command of the subject matter of the courses and competent instructional skills.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31445, filed 03/23/99, effective 06/23/99.

WAC 296-62-31450 Emergency response program requirements under RCRA.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31450, filed 03/23/99, effective 06/23/99.

WAC 296-62-31455 Emergency response plan under RCRA. An emergency response plan must be developed and implemented by all employers. The plan does not need to duplicate any of the subjects fully addressed in the employer's contingency planning required by permits, such as those issued by the United States Environmental Protection Agency, provided that the contingency plan is made part of the emergency response plan. The emergency response plan must be a written portion of the employer's safety and health program. Employers who will evacuate their employees from the worksite location when an emergency occurs and who do not permit any of their employees to assist in handling the emergency are exempt from the requirements of WAC 296-62-31450 through 296-62-31470 if they provide an emergency action plan meeting the requirements in WAC 296-24-567.
[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31455, filed 03/23/99, effective 06/23/99.

WAC 296-62-31460 Elements of an emergency response plan under RCRA. The employer must develop an emergency response plan for emergencies. The plan must address the following areas to the extent that they are not addressed in any specific program required in this part:

(1) Preemergency planning and coordination with outside parties.

(2) Personnel roles, lines of authority, and communication.

(3) Emergency recognition and prevention.

(4) Safe distances and places of refuge.

(5) Site security and control.

(6) Evacuation routes and procedures.

(7) Decontamination procedures.

(8) Emergency medical treatment and first aid.

(9) Emergency alerting and response procedures.

(10) Critique of response and follow-up.

(11) PPE and emergency equipment.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31460, filed 03/23/99, effective 06/23/99.

WAC 296-62-31465 Training requirements for emergency response under RCRA.

(1) Training for emergency response employees must be completed before they are called upon to perform in real emergencies. The training must cover the elements of the emergency response plan, standard operating procedures the employer has established for the job, the personal protective equipment to be worn, and procedures for handling emergency incidents.

Exception #1: *An employer need not train all employees to the degree specified if the employer divides the workforce in a manner such that a sufficient number of employees who have responsibility to control emergencies have the training specified, and all other employees, who may first respond to an emergency incident, have sufficient awareness training to recognize that an emergency response situation exists and that they are instructed in that case to summon the fully trained employees and not attempt to control activities for which they are not trained.*

Exception #2: *An employer need not train all employees to the degree specified if arrangements have been made in advance for an outside fully trained emergency response team to respond in a reasonable period and all employees, who may come to the incident first, have sufficient awareness training to recognize that an emergency response situation exists and they have been instructed to call the designated outside fully trained emergency response team for assistance.*

(2) Employee members of TSD facility emergency response organizations must be trained to a level of competence in the recognition of health and safety hazards to protect themselves and other employees. This would include training in the methods used to minimize the risk from safety and health hazards; in the safe use of control equipment; in the selection and use of appropriate personal protective equipment; in the safe operating procedures to be used at the incident scene; in the techniques of coordination with other employees to minimize

risks; in the appropriate response to overexposure from health hazards or injury to themselves and other employees; and in the recognition of subsequent symptoms which may result from overexposures.

WAC 296-62-31465 (Cont.)

(3) The employer must certify that each covered employee has attended and successfully completed the training required in this subsection, or must certify the employee's competency at least yearly. The method used to demonstrate competency for certification of training must be recorded and maintained by the employer.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31465, filed 03/23/99, effective 06/23/99.

WAC 296-62-31470 Procedures for handling emergency incidents under RCRA.

(1) In addition to the elements for the emergency response plan required in WAC 296-62-31460, the following elements must be included for emergency response plans to the extent that they do not repeat any information already contained in the emergency response plan:

(a) Site topography, layout, and prevailing weather conditions.

(b) Procedures for reporting incidents to local, state, and federal governmental agencies.

(2) The emergency response plan must be compatible and integrated with the disaster, fire, and/or emergency response plans of local, state, and federal agencies.

(3) The emergency response plan must be rehearsed regularly as part of the overall training program for site operations.

(4) The site emergency response plan must be reviewed periodically and, as necessary, be amended to keep it current with new or changing site conditions or information.

(5) An employee alarm system must be installed in accordance with WAC 296-24-631 to notify employees of an emergency situation; to stop work activities if necessary; to lower background noise in order to speed communication; and to begin emergency procedures.

(6) Based upon the information available at time of the emergency, the employer must evaluate the incident and the site response capabilities and proceed with the appropriate steps to implement the site emergency response plan.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-31470, filed 03/23/99, effective 06/23/99.

WAC 296-62-3152 Appendices to Part P--Hazardous waste operations and TSD facilities.

Note: The following appendices serve as nonmandatory guidelines to assist employees and employers in complying with the appropriate requirements of this part. However, WAC 296-62-3060 through 296-62-30615 makes mandatory in certain circumstances the use of Level A and Level B personal protective equipment protection.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3152, filed 03/23/99, effective 06/23/99. Statutory Authority: Chapter 49.17 RCW. 89-21-018, 296-62-3152, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3152, filed 10/6/88, effective 11/7/88.]

WAC 296-62-3160 Appendix A--Personal protective equipment test methods. This appendix sets forth the nonmandatory examples of tests which may be used to evaluate compliance with WAC 296-62-3060. Other tests and other challenge agents may be used to evaluate compliance.

(1) **Totally-encapsulating chemical protective suit pressure test.**

(a) Scope.

(i) This practice measures the ability of a gas tight totally-encapsulating chemical protective suit material, seams, and closures to maintain a fixed positive pressure. The results of this practice allow the gas tight integrity of a total-encapsulating chemical protective suit to be evaluated.

WAC 296-62-3160 (Cont.)

(ii) Resistance of the suit materials to permeation, penetration, and degradation by specific hazardous substances is not determined by this test method.

(b) Definition of terms.

(i) **"Totally-encapsulated chemical protective suit (TECP suit)"** means a full body garment which is constructed of protective clothing materials; covers the wearer's torso, head, arms, and legs; may cover the wearer's hands and feet with tightly attached gloves and boots; completely encloses the wearer and respirator by itself or in combination with the wearer's gloves and boots.

(ii) **"Protective clothing material"** means any material or combination of materials used in an item of clothing for the purpose of isolating parts of the body from direct contact with a potentially hazardous liquid or gaseous chemicals.

(iii) **"Gas tight"** means for the purpose of this test method the limited flow of a gas under pressure from the inside of a TECP suit to atmosphere at a prescribed pressure and time interval.

(c) Summary of test method. The TECP suit is visually inspected and modified for the test. The test apparatus is attached to the suit to permit inflation to the pretest suit expansion pressure for removal of suit wrinkles and creases. The pressure is lowered to the test pressure and monitored for three minutes. If the pressure drop is excessive, the TECP suit fails the test and is removed from service. The test is repeated after leak location and repair.

(d) Required supplies.

(i) Source of compressed air.

(ii) Test apparatus for suit testing including a pressure measurement device with a sensitivity of at least 1/4 inch water gauge.

(iii) Vent valve closure plugs or sealing tape.

(iv) Soapy water solution and soft brush.

(v) Stopwatch or appropriate timing device.

(e) Safety precautions. Care must be taken to provide the correct pressure safety devices required for the source of compressed air used.

(f) Test procedure. Prior to each test, the tester must perform a visual inspection of the suit. Check the suit for seam integrity by visually examining the seams and gently pulling on the seams. Ensure that all air supply lines, fittings, visor, zippers, and valves are secure and show no signs of deterioration.

(i) Seal off the vent valves along with any other normal inlet or exhaust points (such as umbilical air line fittings or facepiece opening) with tape or other appropriate means (caps, plugs, fixture, etc.). Care should be exercised in the sealing process not to damage any of the suit components.

(ii) Close all closure assemblies.

WAC 296-62-3160 (Cont.)

(iii) Prepare the suit for inflation by providing an improvised connection point on the suit for connecting an airline. Attach the pressure test apparatus to the suit to permit suit inflation from a compressed air source equipped with a pressure indicating regulator. The leak tightness of the pressure test apparatus should be tested before and after each test by closing off the end of the tubing attached to the suit and assuring a pressure of three inches water gauge for three minutes can be maintained. If a component is removed for the test, that component must be replaced and a second test conducted with another component removed to permit a complete test of the ensemble.

(iv) The pretest expansion pressure (A) and the suit test pressure (B) must be supplied by the suit manufacturer, but in no case shall they be less than (A) = 3 inches water gauge and (B) = 2 inches water gauge. The ending suit pressure (C) must be no less than eighty percent of the test pressure (B); i.e., the pressure drop must not exceed twenty percent of the test pressure (B).

(v) Inflate the suit until the pressure inside is equal to pressure (A), the pretest expansion suit pressure. Allow at least one minute to fill out the wrinkles in the suit. Release sufficient air to reduce the suit pressure to pressure (B), the suit test pressure. Begin timing. At the end of three minutes, record the suit pressure as pressure (C), the ending suit pressure. The difference between the suit test pressure and the ending suit test pressure (B)-(C) must be defined as the suit pressure drop.

(vi) If the suit pressure drop is more than twenty percent of the suit test pressure (B) during the three minute test period, the suit fails the test and must be removed from service.

(g) Retest procedure.

(i) If the suit fails the test check for leaks by inflating the suit to pressure (A) and brushing or wiping the entire suit (including seams, closures, lens gaskets, glove-to-sleeve joints, etc.) with a mild soap and water solution. Observe the suit for the formation of soap bubbles, which is an indication of a leak. Repair all identified leaks.

(ii) Retest the TECP suit as outlined in (f) of this subsection.

(h) Report. Each TECP suit tested by this practice must have the following information recorded.

(i) Unique identification number, identifying brand name, date of purchase, material of construction, and unique fit features; e.g., special breathing apparatus.

(ii) The actual values for test pressures (A), (B), and (C) must be recorded along with the specific observation times. If the ending pressure (C) is less than eighty percent of the test pressure (B), the suit must be identified as failing the test. When possible, the specific leak location must be identified in the test records. Retest pressure data must be recorded as an additional test.

(iii) The source of the test apparatus used must be identified and the sensitivity of the pressure gauge must be recorded.

(iv) Records must be kept for each pressure test even if repairs are being made at the test location.

Caution. *Visually inspect all parts of the suit to be sure they are positioned correctly and secured tightly before putting the suit back into service. Special care should be taken to examine each exhaust*

valve to make sure it is not blocked. Care should also be exercised to assure that the inside and outside of the suit is completely dry before it is put into storage.

WAC 296-62-3160 (Cont.)

(2) **Totally-encapsulating chemical protective suit qualitative leak test.**

(a) Scope.

(i) This practice semiqualitatively tests gas tight totally-encapsulating chemical protective suit integrity by detecting inward leakage of ammonia vapor. Since no modifications are made to the suit to carry out this test, the results from this practice provide a realistic test for the integrity of the entire suit.

(ii) Resistance of the suit materials to permeation, penetration, and degradation is not determined by this test method. ASTM test methods are available to test suit materials for those characteristics and the tests are usually conducted by the manufacturers of the suits.

(b) Definition of terms.

(i) **"Totally-encapsulated chemical protective suit (TECP suit)"** means a full body garment which is constructed of protective clothing materials; covers the wearer's torso, head, arms, and legs; may cover the wearer's hands and feet with tightly attached gloves and boots; completely encloses the wearer and respirator by itself or in combination with the wearer's gloves and boots.

(ii) **"Protective clothing material"** means any material or combination of materials used in an item of clothing for the purpose of isolating parts of the body from direct contact with a potentially hazardous liquid or gaseous chemicals.

(iii) **"Gas tight"** means for the purpose of this test method the limited flow of a gas under pressure from the inside of a TECP suit to atmosphere at a prescribed pressure and time interval.

(iv) **"Intrusion coefficient."** A number expressing the level of protection provided by a gas tight totally-encapsulating chemical protective suit. The intrusion coefficient is calculated by dividing the test room challenge agent concentration by the concentration of challenge agent found inside the suit. The accuracy of the intrusion coefficient is dependent on the challenge agent monitoring methods. The larger the intrusion coefficient, the greater the protection provided by the TECP suit.

(c) Summary of recommended practice. The volume of concentrated aqueous ammonia solution (ammonia hydroxide, NH4 OH) required to generate the test atmosphere is determined using the directions outlined in WAC 296-62-3160 (2)(f)(i). The suit is donned by a person wearing the appropriate respiratory equipment (either a positive pressure self-contained breathing apparatus or a supplied air respirator) and worn inside the enclosed test room. The concentrated aqueous ammonia solution is taken by the suited individual into the test room and poured into an open plastic pan. A two-minute evaporation period is observed before the test room concentration is measured using a high range ammonia length of stain detector tube. When the ammonia reaches a concentration of between 1000 and 1200 ppm, the suited individual starts a standardized exercise protocol to stress and flex the suit. After this protocol is completed the test room concentration is measured again.

The suited individual exits the test room and his stand-by person measures the ammonia concentration inside the suit using a low range ammonia length of stain detector tube or other more sensitive ammonia detector. A stand-by person is required to observe the test individual

during the test procedure, aid the person in donning and doffing the TECP suit and monitor the suit interior. The intrusion coefficient of the suit can be calculated by dividing the average test

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area concentration by the interior suit concentration. A colorimetric indicator strip of bromophenol blue is placed on the inside of the suit facepiece lens so that the suited individual is able to detect a color change and know if the suit has a significant leak. If a color change is observed the individual should leave the test room immediately.

(d) Required supplies.

(i) A supply of concentrated aqueous ammonium hydroxide, 58% by weight.

(ii) A supply of bromophenol/blue indicating paper, sensitive to 5-10 ppm ammonia or greater over a two-minute period of exposure [pH 3.0 (yellow) to pH 4.6 (blue)].

(iii) A supply of high range (0.5-10 volume percent) and low range (5-700 ppm) detector tubes for ammonia and the corresponding sampling pump. More sensitive ammonia detectors can be substituted for the low range detector tubes to improve the sensitivity of this practice.

(iv) A shallow plastic pan (PVC) at least 12":14":1" and a half pint plastic container (PVC) with tightly closing lid.

(v) A graduated cylinder or other volumetric measuring device of at least fifty milliliters in volume with an accuracy of at least ± 1 milliliters.

(e) Safety precautions.

(i) Concentrated aqueous ammonium hydroxide, NH4OH is a corrosive volatile liquid requiring eye, skin, and respiratory protection. The person conducting the test must review the MSDS for aqueous ammonia.

(ii) Since the established permissible exposure limit for ammonia is 35 ppm as a 15 minute STEL, only persons wearing a positive pressure self-contained breathing apparatus or a supplied air respirator must be in the chamber. Normally only the person wearing the total-encapsulating suit will be inside the chamber. A stand-by person must have a self-contained breathing apparatus, or a positive pressure supplied air respirator available to enter the test area should the suited individual need assistance.

(iii) A method to monitor the suited individual must be used during this test. Visual contact is the simplest but other methods using communication devices are acceptable.

(iv) The test room must be large enough to allow the exercise protocol to be carried out and then to be ventilated to allow for easy exhaust of the ammonia test atmosphere after the test(s) are completed.

(v) Individuals must be medically screened for the use of respiratory protection and checked for allergies to ammonia before participating in this test procedure.

(f) Test procedure.

(i) Measure the test area to the nearest foot and calculate its volume in cubic feet. Multiply the test area volume by 0.2 milliliters of concentrated aqueous ammonia per cubic foot of test area volume to determine the approximate volume of concentrated aqueous ammonia required to generate 1000 ppm in the test area.

(A) Measure this volume from the supply of concentrated ammonia and place it into a closed plastic container.

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(B) Place the container, several high range ammonia detector tubes and the pump in the clean test pan and locate it near the test area entry door so that the suited individual has easy access to these supplies.

(ii) In a noncontaminated atmosphere, open a presealed ammonia indicator strip and fasten one end of the strip to the inside of the suit face shield lens where it can be seen by the wearer. Moisten the indicator strip with distilled water. Care must be taken not to contaminate the detector part of the indicator paper by touching it. A small piece of masking tape or equivalent should be used to attach the indicator strip to the interior of the suit face shield.

(iii) If problems are encountered with this method of attachment the indicator strip can be attached to the outside of the respirator facepiece being used during the test.

(iv) Don the respiratory protective device normally used with the suit, and then don the TECP suit to be tested. Check to be sure all openings which are intended to be sealed (zippers, gloves, etc.) are completely sealed. do not, however, plug off any venting valves.

(v) Step into the enclosed test room such as a closet, bathroom, or test booth, equipped with an exhaust fan. No air should be exhausted from the chamber during the test because this will dilute the ammonia challenge concentrations.

(vi) Open the container with the premeasured volume of concentrated aqueous ammonia within the enclosed test room, and pour the liquid into the empty plastic test pan. Wait two minutes to allow for adequate volatilization of the concentrated aqueous ammonia. A small mixing fan can be used near the evaporation pan to increase the evaporation rate of the ammonia solution.

(vii) After two minutes a determination of the ammonia concentration within the chamber should be made using the high range colorimetric detector tube. A concentration of 1000 ppm ammonia or greater must be generated before the exercises are started.

(viii) To test the integrity of the suit the following four minute exercise protocol should be followed:

(A) Raising the arms above the head with at least fifteen raising motions completed in one minute.

(B) Walking in place for one minute with at least fifteen raising motions of each leg in a one-minute period.

(C) Touching the toes with at least ten complete motions of the arms from above the head to touching of the toes in a one-minute period.

(D) Knee bends with at least ten complete standing and squatting motions in a one-minute period.

(ix) If at any time during the test the colorimetric indicating paper should change colors the test should be stopped and (f)(x) and (xi) of this subsection initiated.

(x) After completion of the test exercise, the test area concentration should be measured again using the high range colorimetric detector tube.

(xi) Exit the test area.

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(xii) The opening created by the suit zipper or other appropriate suit penetration should be used to determine the ammonia concentration in the suit with the low range length of stain detector tube or other ammonia monitor. The internal TECP suit air should be sampled far enough from the enclosed test area to prevent a false ammonia reading.

(xiii) After completion of the measurement of the suit interior ammonia concentration the test is concluded and the suit is doffed and the respirator removed.

(xiv) The ventilating fan for the test room should be turned on and allowed to run for enough time to remove the ammonia gas. The fan must be vented to the outside of the building.

(xv) Any detectable ammonia in the suit interior (5 ppm ammonia (NH_3) or more for the length of stain detector tube) indicates the suit failed the test. When other ammonia detectors are used, a lower level of detection is possible and it should be specified as the pass/fail criteria.

(xvi) By following this test method an intrusion coefficient of approximately two hundred or more can be measured with the suit in a completely operational condition. If the intrusion coefficient is 200 or more, then the suit is suitable for emergency response and field use.

(g) Retest procedures.

(i) If the suit fails this test, check for leaks by following the pressure test in test (A) above.

(ii) Retest the TECP suit as outlined in the test procedure in (f) of this subsection.

(h) Report.

(i) Each gas tight totally-encapsulating chemical protective suit tested by this practice must have the following information recorded.

(A) Unique identification number, identifying brand name, date of purchase, material of construction, and unique suit features; e.g., special breathing apparatus.

(B) General description of test room used for test.

(C) Brand name and purchase date of ammonia detector strips and color change data.

(D) Brand name, sampling range, and expiration date of the length of stain ammonia detector tubes. The brand name and model of the sampling pump should also be recorded. If another type of ammonia detector is used, it should be identified along with its minimum detection limit for ammonia.

(E) Actual test results must list the two test area concentrations, their average, the interior suit concentration, and the calculated intrusion coefficient. Retest data must be recorded as an additional test.

(ii) The evaluation of the data must be specified as “suit passed” or “suit failed” and the date of the test. Any detectable ammonia (5 ppm or greater for the length of stain detector tube) in the suit interior indicates the suit fails this test. When other ammonia detectors

are used, a lower level of detection is possible and it should be specified as the pass/fail criteria.

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Caution. *Visually inspect all parts of the suit to be sure they are positioned correctly and secured tightly before putting the suit back into service. Special care should be taken to examine each exhaust valve to make sure it is not blocked.*

Care should also be exercised to assure that the inside and outside of the suit is completely dry before it is put into storage.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3160, filed 03/23/99, effective 06/23/99. Statutory Authority: Chapter 49.17 RCW. 91-24-017 (Order 91-07), 296-62-3160, filed 11/22/91, effective 12/24/91; 90-20-091 (Order 90-14), 296-62-3160, filed 10/1/90, effective 11/15/90; 89-21-018, 296-62-3160, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3160, filed 10/6/88, effective 11/7/88.]

WAC 296-62-3170 Appendix B--General description and discussion of the levels of protection and protective gear.

(1) This appendix sets forth information about personal protective equipment (PPE) protection levels which may be used to assist employers in complying with the PPE requirements of this section.

(2) As required by the standard, PPE must be selected which will protect employees from the specific hazards which they are likely to encounter during their work on-site.

(3) Selection of the appropriate PPE is a complex process which must take into consideration a variety of factors. Key factors involved in this process are identification of the hazards or suspected hazards, their routes of potential hazard to employees (inhalation, skin absorption, ingestion, and eye or skin contact), and the performance of the PPE materials (and seams) in providing a barrier to these hazards. The amount of protection provided by PPE is material-hazard specific. That is, protective equipment materials will protect well against some hazardous substances and poorly, or not at all, against others. In many instances, protective equipment materials cannot be found which will provide continuous protection from the particular hazardous substance. In these cases the breakthrough time of the protective material should exceed the work durations.

(4) Other factors in this selection process to be considered are matching the PPE to the employee's work requirements and task-specific conditions. The durability of PPE materials, such as tear strength and seam strength, must be considered in relation to the employee's tasks. The effects of PPE in relation to heat stress and task duration are a factor in selecting and using PPE. In some cases layers of PPE may be necessary to provide sufficient protection, or to protect expensive PPE inner garments, suits or equipment.

(5) The more that is known about the hazards at the site, the easier the job of PPE selection becomes. As more information about the hazards and conditions at the site becomes available, the site supervisor can make decisions to up-grade or down-grade the level of PPE protection to match the tasks at hand.

(6) The following are guidelines which an employer can use to begin the selection of the appropriate PPE. As noted above, the site information may suggest the use of combinations of PPE selected from the different protection levels (i.e., A, B, C, or D) as being more suitable to the hazards of the work. It should be cautioned that the listing below does not fully address the performance of the specific PPE material in relation to the specific hazards at the job site, and that PPE selection, evaluation and reselection is an ongoing process until sufficient information about the hazards and PPE performance is obtained.

(7) Personal protective equipment has been divided into four categories based on the degree of protection afforded (see subsection (8) of this section for further explanation of Levels A, B, C, and D hazards):

(a) Level A. To be selected when the greatest level of skin, respiratory, and eye protection is required. The following constitute Level A equipment; it may be used as appropriate:

(i) Positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied-air respirator with escape SCBA, approved by the National Institute for Occupational Safety and Health (NIOSH).

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(ii) Totally-encapsulating chemical-protective suit.

(iii) Coveralls.*

(iv) Long underwear.*

(v) Gloves, outer, chemical-resistant.

(vi) Gloves, inner, chemical-resistant.

(vii) Boots, chemical-resistant steel toe and shank.

(viii) Hard hat (under suit).*

(ix) Disposable protective suit, gloves, and boots. (Depending on suit construction, may be worn over totally-encapsulating suit.)

*Optional, as applicable.

(b) Level B. The highest level of respiratory protection is necessary but a lesser level of skin protection is needed. The following constitute Level B equipment; it may be used as appropriate:

(i) Positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied-air respirator with escape SCBA (NIOSH approved).

(ii) Hooded chemical-resistant clothing (overalls and long-sleeved jacket, coveralls, one or two-piece chemical-splash suit, disposable chemical-resistant overalls).

(iii) Coveralls.*

(iv) Gloves, outer, chemical-resistant.

(v) Gloves, inner, chemical-resistant.

(vi) Boots, outer, chemical-resistant steel toe and shank.

(vii) Boot-covers, outer, chemical-resistant (disposable).*

(viii) Hard hat.

(ix) Face shield.*

*Optional, as applicable.

(c) Level C. The concentration(s) and type(s) of airborne substance(s) is known and the criteria for using air purifying respirators are met. The following constitute Level C equipment; it may be used as appropriate.

(i) Full-face or half-mask, air purifying respirators (NIOSH approved).

(ii) Hooded chemical-resistant clothing (overalls; two-piece chemical-splash suit; disposable chemical-resistant overalls).

(iii) Coveralls.*

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(iv) Gloves, outer, chemical-resistant.

(v) Gloves, inner, chemical-resistant.

(vi) Boots (outer), chemical-resistant steel toe and shank.*

(vii) Boot-covers, outer, chemical-resistant (disposable).*

(viii) Hard hat.

(ix) Escape mask.*

(x) Face shield.*

Optional, as applicable.

(d) Level D. A work uniform affording minimal protection: Used for nuisance contamination only. The following constitute Level D equipment; it may be used as appropriate.

(i) Coveralls.

(ii) Gloves.*

(iii) Boots/shoes, chemical-resistant steel toe and shank.

(iv) Boots, outer, chemical-resistant (disposable).*

(v) Safety glasses or chemical splash goggles.*

(vi) Hard hat.

(vii) Escape mask.*

(viii) Face shield.*

Optional, as applicable.

(8) Part B. The types of hazards for which Levels A, B, C, and D protection are appropriate are described below:

(a) Level A - Level A protection should be used when:

(i) The hazardous substance has been identified and requires the highest level of protection for skin, eyes, and the respiratory system based on either the measured (or potential for) high concentration of atmospheric vapors, gases, or particulates; or the site operations and work functions involve a high potential for splash, immersion, or exposure to unexpected vapors, gases, or particulates of materials that are harmful to skin or capable of being absorbed through the intact skin;

(ii) Substances with a high degree of hazard to the skin are known or suspected to be present, and skin contact is possible; or

(iii) Operations are being conducted in confined, poorly ventilated areas, and the absence of conditions requiring Level A have not yet been determined.

WAC 296-62-3170 (Cont.)

(b) Level B protection should be used when:

(i) The type and atmospheric concentration of substances have been identified and require a high level of respiratory protection, but less skin protection;

(ii) The atmosphere contains less than 19.5 percent oxygen; or

(iii) The presence of incompletely identified vapors or gases is indicated by a direct-reading organic vapor detection instrument, but vapors and gases are not suspected of containing high levels of chemicals harmful to skin or capable of being absorbed through the skin.

Note: This involves atmospheres with IDLH concentrations of specific substances that present severe inhalation hazards and that do not represent a severe skin hazard; or that do not meet the criteria for use of air-purifying respirators.

(c) Level C protection should be used when:

(i) The atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect or be absorbed through any exposed skin;

(ii) The types of air contaminants have been identified, concentrations measured, and an air-purifying respirator is available that can remove the contaminants; and

(iii) All criteria for the use of air-purifying respirators are met.

(d) Level D protection should be used when:

(i) The atmosphere contains no known hazard; and

(ii) Work functions preclude splashes, immersion, or the potential for unexpected inhalation of or contact with hazardous levels of any chemicals.

Note: As stated before combinations of personal protective equipment other than those described for Levels A, B, C, and D protection may be more appropriate and may be used to provide the proper level of protection.

(9) As an aid in selecting suitable chemical protective clothing, it should be noted that the National Fire Protection Association (NFPA) has developed standards on chemical protective clothing. The standards that have been adopted include:

(a) NFPA 1991 - Standard on Vapor-Protective Suits for Hazardous Chemical Emergencies (EPA Level A Protective Clothing);

(b) NFPA 1992 - Standard on Liquid Splash-Protective Suits for Hazardous Chemical Emergencies (EPA Level B Protective Clothing);

(c) NFPA 1993 - Standard on Liquid Splash-Protective Suits for Nonemergency, Nonflammable Hazardous Chemical Situations (EPA Level B Protective Clothing).

(10) These standards apply documentation and performance requirements to the manufacture of chemical protective suits. Chemical protective suits meeting these requirements are labelled as compliant with the appropriate standard. It is recommended that chemical protective suits that meet these standards be used.

[Statutory Authority: Chapter 49.17 RCW. 95-04-006, 296-62-3170, filed 1/18/95, effective 3/10/95; 90-20-091 (Order 90-14), 296-62-3170, filed 10/1/90, effective 11/15/90; 89-21-018, 296-62-3170, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3170, filed 10/6/88, effective 11/7/88.]

WAC 296-62-3180 Appendix C--Compliance guidelines.

(1) Occupational safety and health program. Each hazardous waste site clean-up effort will require an occupational safety and health program headed by the site coordinator or the employer's representative. The purpose of the program will be the protection of employees at the site and will be an extension of the employer's overall safety and health program. The program will need to be developed before work begins on the site and implemented as work proceeds as stated in WAC 296-62-3010 through 296-62-30145. The program is to facilitate coordination and communication of safety and health issues among personnel responsible for the various activities which will take place at the site. It will provide the overall means for planning and implementing the needed safety and health training and job orientation of employees who will be working at the site. The program will provide the means for identifying and controlling worksite hazards and the means for monitoring program effectiveness. The program will need to cover the responsibilities and authority of the site coordinator or the employer's manager on the site for the safety and health of employees at the site, and the relationships with contractors or support services as to what each employer's safety and health responsibilities are for their employees on the site. Each contractor on the site needs to have its own safety and health program so structured that it will smoothly interface with the program of the site coordinator or principal contractor. Also those employers involved with treating, storing, or disposal of hazardous waste as covered in WAC 296-62-3140 must have implemented a safety and health plan for their employees. This program is to include the hazard communication program required in WAC 296-62-31405 and the training required in WAC 296-62-31420 and 296-62-31425 as parts of the employers comprehensive overall safety and health program. This program is to be in writing.

(a) Each site or workplace safety and health program will need to include the following:

(i) Policy statements of the line of authority and accountability for implementing the program, the objectives of the program and the role of the site safety and health officer or manager and staff;

(ii) Means or methods for the development of procedures for identifying and controlling workplace hazards at the site;

(iii) Means or methods for the development and communication to employees of the various plans, work rules, standard operating procedures and practices that pertain to individual employees and supervisors;

(iv) Means for the training of supervisors and employees to develop the needed skills and knowledge to perform their work in a safe and healthful manner;

(v) Means to anticipate and prepare for emergency situations; and

(vi) Means for obtaining information feedback to aid in evaluating the program and for improving the effectiveness of the program. The management and employees should be trying continually to improve the effectiveness of the program thereby enhancing the protection being afforded those working on the site.

(b) Accidents on the site should be investigated to provide information on how such occurrences can be avoided in the future. When injuries or illnesses occur on the site or workplace, they will need to be investigated to determine what needs to be done to prevent this incident from occurring again. Such information will need to be used as feedback on the effectiveness of the program and the information turned into positive steps to prevent any reoccurrence. Receipt of employee suggestions or complaints relating to safety and health issues involved with site or workplace activities is also a feedback mechanism that can be used effectively to improve the program and may serve in part as an evaluative tool(s).

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(c) For the development and implementation of the program to be the most effective, professional safety and health personnel should be used. Certified safety professionals, board-certified industrial hygienists, or registered professional safety engineers are good examples of professional stature for safety and health managers who will administer the employer's program.

(2) The training programs for employees subject to the requirements of WAC 296-62-3040 through 296-62-30465 are expected to address: The safety and health hazards employees should expect to find on sites; what control measures or techniques are effective for those hazards; what monitoring procedures are effective in characterizing exposure levels; what makes an effective employer's safety and health program; what a site safety and health plan should include; hands-on training with personal protective equipment and clothing they may be expected to use; the contents of the WISHA standard relevant to the employee's duties and functions; and, employee's responsibilities under WISHA and other regulations. Supervisors will need training in their responsibilities under the safety and health program and its subject areas such as the spill containment program, the personal protective equipment program, the medical surveillance program, the emergency response plan and other areas.

(a) The training programs for employees subject to the requirements of WAC 296-62-3140 through 296-62-31465 should address: The employer's safety and health program elements impacting employees; the hazard communication program; the medical surveillance program; the hazards and the controls for such hazards that employees need to know for their job duties and functions. All require annual refresher training.

(b) The training programs for employees covered by the requirements of WAC 296-62-31110 will address those competencies required for the various levels of response such as: The hazards associated with hazardous substances; hazard identification and awareness; notification of appropriate persons; the need for and use of personal protective equipment including respirators; the decontamination procedures to be used; preplanning activities for hazardous substance incidents including the emergency response plan; company standard operating procedures for hazardous substance emergency responses; the use of the incident command system and other subjects. Hands-on training should be stressed whenever possible. Critiques done after an incident which include any evaluation of what worked, and what did not, and how can we do better the next time, may be counted as training time.

(3) Decontamination. Decontamination procedures will be tailored to the specific hazards of the site and will vary in complexity, and number of steps, depending on the level of hazard and the employee's exposure to the hazard. Decontamination procedures and PPE decontamination methods will vary depending upon the specific substance, since one procedure or method will not work for all substances. Evaluation of decontamination methods and procedures should be performed, as necessary, to assure that employees are not exposed to hazards by reusing PPE. References in WAC 296-62-3190, Appendix D, may be used for guidance in establishing an effective decontamination program. In addition, the United States Coast Guard Manual, “Policy Guidance for Response to Hazardous Chemical Releases,” United States Department of Transportation, Washington, D.C. (COMDTINST M16465.30), is a good reference for establishing an effective decontamination program.

(4) Emergency response plans. States, along with designated districts within the states, will be developing or have developed emergency response plans. These state and district plans are to be used in the emergency response plans called for in this standard. Each employer needs to assure that its emergency response plan is compatible with the local plan. The major reference being used to aid in developing the state and local district plans is the Hazardous Materials Emergency Planning Guide, NRT-1. The current Emergency Response Guidebook from the United States Department of Transportation, CMA's CHEMTREC and the Fire Service Emergency Management Handbook may also be used as resources.

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Employers involved with treatment, storage, and disposal facilities for hazardous waste, which have the required contingency plan called for by their permit, would not need to duplicate the same planning elements. Those items of the emergency response plan that are properly addressed in the contingency plan may be substituted into the emergency response plan required in WAC 296-62-410, Part R, Emergency response to hazardous substance release or otherwise kept together for employer and employee use.

(5) Personal protective equipment programs. The purpose of personal protective clothing and equipment (PPE) is to shield or isolate individuals from the chemical, physical, and biologic hazards that may be encountered at a hazardous substance site.

(a) As discussed in Appendix B, no single combination of protective equipment and clothing is capable of protecting against all hazards. Thus PPE should be used in conjunction with other protective methods and its effectiveness evaluated periodically.

(b) The use of PPE can itself create significant worker hazards, such as heat stress, physical and psychological stress, and impaired vision, mobility, and communication. For any given situation, equipment and clothing will be selected that provide an adequate level of protection. However, over-protection, as well as under-protection, can be hazardous and should be avoided where possible.

(c) Two basic objectives of any PPE program will be to protect the wearer from safety and health hazards, and to prevent injury to the wearer from incorrect use and/or malfunction of the PPE. To accomplish these goals, a comprehensive PPE program will include hazard identification, medical monitoring, environmental surveillance, selection, use, maintenance, and decontamination of PPE and its associated training.

(d) The written PPE program will include policy statements, procedures, and guidelines. Copies will be made available to all employees and a reference copy will be made available at the worksite. Technical data on equipment, maintenance manuals, relevant regulations, and other essential information will also be collected and maintained.

(6) Medical surveillance programs.

(a) Workers handling hazardous substances may be exposed to toxic chemicals, safety hazards, biologic hazards, and radiation. Therefore, a medical surveillance program is essential to assess and monitor workers' health and fitness for employment in hazardous waste operations and during the course of work; to provide emergency and other treatment as needed; and to keep accurate records for future reference.

(b) *The Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities* developed by the National Institute for Occupational Safety and Health (NIOSH), the Occupational Safety and Health Administration (OSHA), the United States Coast Guard (USCG), and the Environmental Protection Agency (EPA); October 1985 provides an excellent example of the types of medical testing that should be done as part of a medical surveillance program.

(7) New technology and spill containment programs. Where hazardous substances may be released by spilling from a container that will expose employees to the hazards of the materials, the employer will need to implement a program to contain and control the spilled material. Diking and ditching, as well as use of absorbents like diatomaceous earth, are traditional techniques which have proven to be effective over the years. However, in recent years new products have come into the marketplace, the use of which complement and increase the effectiveness of these traditional methods. These new products also provide

emergency responders and others with additional tools or agents to use to reduce the hazards of spilled materials.

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These agents can be rapidly applied over a large area and can be uniformly applied or otherwise can be used to build a small dam, thus improving the workers' ability to control spilled material. These application techniques enhance the intimate contact between the agent and the spilled material allowing for the quickest effect by the agent or quickest control of the spilled material. Agents are available to solidify liquid spilled materials, to suppress vapor generation from spilled materials, and to do both. Some special agents, which when applied as recommended by the manufacturer, will react in a controlled manner with the spilled material to neutralize acids or caustics, or greatly reduce the level of hazard of the spilled material.

There are several modern methods and devices for use by emergency response personnel or others involved with spill control efforts to safely apply spill control agents to control spilled material hazards. These include portable pressurized applicators similar to hand-held portable fire extinguishing devices, and nozzle and hose systems similar to portable fire fighting foam systems which allow the operator to apply the agent without having to come into contact with the spilled material. The operator is able to apply the agent to the spilled material from a remote position.

The solidification of liquids provides for rapid containment and isolation of hazardous substance spills. By directing the agent at run-off points or at the edges of the spill, the reactant solid will automatically create a barrier to slow or stop the spread of the material. Clean-up of hazardous substances as greatly improved when solidifying agents, acid or caustic neutralizers, or activated carbon absorbents are used. Properly applied, these agents can totally solidify liquid hazardous substances or neutralize or absorb them, which results in materials which are less hazardous and easier to handle, transport, and dispose of. The concept of spill treatment, to create less hazardous substances, will improve the safety and level of protection of employees working at spill clean-up operations or emergency response operations to spills of hazardous substances.

The use of vapor suppression agents for volatile hazardous substances, such as flammable liquids and those substances which present an inhalation hazard, is important for protecting workers. The rapid and uniform distribution of the agent over the surface of the spilled material can provide quick vapor knockdown. There are temporary and long-term foam-type agents which are effective on vapors and dusts, and activated carbon adsorption agents which are effective for vapor control and soaking-up of the liquid. The proper use of hose lines or hand-held portable pressurized applicators provides good mobility and permits the worker to deliver the agent from a safe distance without having to step into the untreated spilled material. Some of these systems can be recharged in the field to provide coverage of larger spill areas than the design limits of a single charged applicator unit. Some of the more effective agents can solidify the liquid flammable hazardous substances and at the same time elevate the flashpoint above 140 deg. F so the resulting substance may be handled as a nonhazardous waste material if it meets the United States Environmental Protection Agency's 40 CFR part 261 requirements (see particularly Sec. 261.21).

All workers performing hazardous substance spill control work are expected to wear the proper protective clothing and equipment for the materials present and to follow the employer's established standard operating procedures for spill control. All involved workers need to be trained in the established operating procedures; in the use and care of spill control equipment; and in the associated hazards and control of such hazards of spill containment work.

These new tools and agents are the things that employers will want to evaluate as part of their new technology program. The treatment of spills of hazardous substances or wastes at an emergency incident as part of the immediate spill containment and control efforts is sometimes acceptable to EPA and a permit exception is described in 40 CFR 264.1 (g)(8) and 265.1 (c)(11).

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3180, filed 03/23/99, effective 06/23/99. Statutory Authority: Chapter 49.17 RCW. 90-20-091 (Order 90-14), 296-62-3180, filed 10/1/90, effective 11/15/90; 89-21-018 (Order 89-10), 296-62-3180, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3180, filed 10/6/88, effective 11/7/88.]

WAC 296-62-3190 Appendix D--References. The following references may be consulted for further information on the subject of this notice:

(1) OSHA Instruction DFO CPL 2.70 - January 29, 1986, Special Emphasis Program: Hazardous Waste Sites.

(2) OSHA Instruction DFO CPL 2-2.37A - January 29, 1986, Technical Assistance and Guidelines for Superfund and Other Hazardous Waste Site Activities.

(3) OSHA Instruction DTS CPL 2.74 - January 29, 1986, Hazardous Waste Activity Form, OSHA 175.

(4) Hazardous Waste Inspections Reference Manual, U.S. Department of Labor, Occupational Safety and Health Administration, 1986.

(5) Memorandum of Understanding Among the National Institute for Occupational Safety and Health, the Occupational Safety and Health Administration, the United States Coast Guard, and the United States Environmental Protection Agency; Guidance for Worker Protection During Hazardous Waste Site Investigations and Clean-up and Hazardous Substance Emergencies; December 18, 1980.

(6) National Priorities List, 1st Edition, October 1984; U.S. Environmental Protection Agency, Revised periodically.

(7) Preparation of a Site Safety Plan, Field Standard Operating Procedures (F.S.O.P.) 9; U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Hazardous Response Support Division, April 1985.

(8) Standard Operating Safety Guidelines; U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Hazardous Response Support Division, Environmental Response Team; November 1984.

(9) Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, National Institute for Occupational Safety and Health (NIOSH), Occupational Safety and Health Administration (OSHA), U.S. Coast Guard (USCG), and Environmental Protection Agency (EPA); October 1985.

(10) Protecting Health and Safety at Hazardous Waste Sites: An Overview, U.S. Environmental Protection Agency, EPA/625/9-85/006; September 1985.

(11) Hazardous Waste Sites and Hazardous Substance Emergencies, NIOSH Worker Bulletin, U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health; December 1982.

(12) Personal Protective Equipment for Hazardous Materials Incidents: A Selection Guide; U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health; October 1984.

(13) Report to the Congress on Hazardous Materials Training, Planning and Preparedness, Federal Emergency Management Agency, Washington, D.C., July 1986.

(14) Community Teamwork: Working Together to Promote Hazardous Materials Transportation Safety. U.S. Department of Transportation, Washington, D.C., May 1983.

[Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3190, filed 03/23/99, effective 06/23/99. [Statutory Authority: Chapter 49.17 RCW. 90-20-091 (Order 90-14), 296-62-3190, filed 10/1/90, effective 11/15/90; 89-21-018 (Order 89-10), 296-62-3190, filed 10/10/89, effective 11/24/89; 88-21-002 (Order 88-23), 296-62-3190, filed 10/6/88, effective 11/7/88.]

WAC 296-62-3195 Appendix E--Training curriculum guidelines. The following nonmandatory general criteria may be used for assistance in developing site-specific training curriculum used to meet the training requirements of WAC 296-62-3040, through 296-62-30465, 296-62-31435 through 296-62-31445, 296-62-31465, 296-62-4102 through 296-62-41021, and 296-62-41023.

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These are generic guidelines and they are not presented as a complete training curriculum for any specific employer. Site-specific training programs must be developed on the basis of a needs assessment of the hazardous waste site, RCRA/TSDF, or emergency response operation in accordance with this chapter (chapter 296-62 WAC, Part P and Part R).

The guidance set forth here presents a highly effective program that in the areas covered would meet or exceed the regulatory requirements. In addition, other approaches could meet the regulatory requirements.

Suggested general criteria:

Definitions:

"Competent" means possessing the skills, knowledge, experience, and judgment to perform assigned tasks or activities satisfactorily as determined by the employer.

"Demonstration" means the showing by actual use of equipment or procedures.

"Hands-on training" means training in a simulated work environment that permits each student to have experience performing tasks, making decisions, or using equipment appropriate to the job assignment for which the training is being conducted.

"Initial training" means training required prior to beginning work.

"Lecture" means an interactive discourse with a class lead by an instructor.

"Proficient" means meeting a stated level of achievement.

"Site-specific" means individual training directed to the operations of a specific job site.

"Training hours" means the number of hours devoted to lecture, learning activities, small group work sessions, demonstration, evaluations, or hands-on experience.

Suggested core criteria:

(1) Training facility. The training facility should have available sufficient resources, equipment, and site locations to perform concise and hands-on training when appropriate. Training facilities should have sufficient organization, support staff, and services to conduct training in each of the courses offered.

(2) Training director. Each training program should be under the direction of a training director who is responsible for the program. The training director should have a minimum of two years of employee education experience.

(3) Instructors. Instructors should be deemed competent on the basis of previous documented experience in their area of instruction, successful completion of a "train-the-trainer" program specific to the topics they will teach, and an evaluation of instructional competence by the training director.

(a) Instructors should be required to maintain professional competency by participating in continuing education or professional development programs or by successfully completing an annual refresher course and having an annual review by the training director.

(b) The annual review by the training director should include observation of an instructor's delivery, a review of those observations with the trainer, and an analysis of any instructor or class evaluations completed by the students during the previous year.

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(4) Course materials. The training director should approve all course materials to be used by the training provider. Course materials should be reviewed and updated at least annually. Materials and equipment should be in good working order and maintained properly.

(a) All written and audio-visual materials in training curricula should be peer reviewed by technically competent outside reviewers or by a standing advisory committee.

(b) Reviewers should possess expertise in the following disciplines were applicable: Occupational health, industrial hygiene and safety, chemical/environmental engineering, employee education, or emergency response. One or more of the peer reviewers should be an employee experienced in the work activities to which the training is directed.

(5) Students. The program for accepting students should include:

(a) Assurance that the student is or will be involved in work where chemical exposures are likely and that the student possesses the skills necessary to perform the work.

(b) A policy on the necessary medical clearance.

(6) Ratios. Student-instructor ratios should not exceed thirty students per instructor. Hands-on activity requiring the use of personal protective equipment should have the following student-instructor ratios: For Level C or Level D personal protective equipment the ratio should be ten students per instructor. For Level A or Level B personal protective equipment the ratio should be five students per instructor.

(7) Proficiency assessment. Proficiency should be evaluated and documented by the use of a written assessment and a skill demonstration selected and developed by the training director and training staff. The assessment and demonstration should evaluate the knowledge and individual skills developed in the course of training. The level of minimum achievement necessary for proficiency must be specified in writing by the training director.

(a) If a written test is used, there should be a minimum of fifty questions. If a written test is used in combination with a skills demonstration, a minimum of twenty-five questions should be used. If a skills demonstration is used, the tasks chosen and the means to rate successful completion should be fully documented by the training director.

(b) The content of the written test or of the skill demonstration must be relevant to the objectives of the course.

The written test and skill demonstration should be updated as necessary to reflect changes in the curriculum and any update should be approved by the training director.

(c) The proficiency assessment methods, regardless of the approach or combination of approaches used, should be justified, documented and approved by the training director.

(d) The proficiency of those taking the additional courses for supervisors should be evaluated and documented by using proficiency assessment methods acceptable to the training director. These proficiency assessment methods must reflect the additional responsibilities borne by supervisory personnel in hazardous waste operations or emergency response.

(8) Course certificate. Written documentation should be provided to each student who satisfactorily completes the training course. The documentation should include:

(a) Student's name.

(b) Course title.

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(c) Course date.

(d) Statement that the student has successfully completed the course.

(e) Name and address of the training provider.

(f) An individual identification number for the certificate.

(g) List of the levels of personal protective equipment used by the student to complete the course.

(i) This documentation may include a certificate and an appropriate wallet-sized laminated card with a photograph of the student and the above information.

(ii) When such course certificate cards are used, the individual identification number for the training certificate should be shown on the card.

(9) Recordkeeping. Training providers should maintain records listing the dates courses were presented, the names of the individual course attendees, the names of those students successfully completing each course, and the number of training certificates issued to each successful student. These records should be maintained for a minimum of five years after the date an individual participated in a training program offered by the training provider. These records should be available and provided upon the student's request or as mandated by law.

(10) Program quality control. The training director should conduct or direct an annual written audit of the training program. Program modifications to address deficiencies, if any, should be documented, approved, and implemented by the training provider. The audit and the program modification documents should be maintained at the training facility.

Suggested Program Quality Control Criteria:

Factors listed here are suggested criteria for determining the quality and appropriateness of employee health and safety training for hazardous waste operations and emergency response.

(1) Training plan. Adequacy and appropriateness of the training program's curriculum development, instructor training, distribution of course materials, and direct student training should be considered, including:

(a) The duration of training, course content, and course schedules/agendas;

(b) The different training requirements of the various target populations, as specified in the appropriate generic training curriculum;

(c) The process for the development of curriculum, which includes appropriate technical input, outside review, evaluation, program pretesting.

(d) The adequate and appropriate inclusion of hands-on, demonstration, and instruction methods;

(e) Adequate monitoring of student safety, progress, and performance during the training.

(2) Program management, training director, staff, and consultants. Adequacy and appropriateness of staff performance and delivering an effective training program should be considered, including:

(a) Demonstration of the training director's leadership in assuring quality of health and safety training;

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(b) Demonstration of the competency of the staff to meet the demands of delivering high quality hazardous waste employee health and safety training;

(c) Organization charts establishing clear lines of authority;

(d) Clearly defined staff duties including the relationship of the training staff to the overall program;

(e) Evidence that the training organizational structure suits the needs of the training program;

(f) Appropriateness and adequacy of the training methods used by the instructors;

(g) Sufficiency of the time committed by the training director and staff to the training program;

(h) Adequacy of the ratio of training staff to students;

(i) Availability and commitment of the training program of adequate human and equipment resources in the areas of:

(i) Health effects;

(ii) Safety;

(iii) Personal protective equipment (PPE);

(iv) Operational procedures;

(v) Employee protection practices/procedures;

(j) Appropriateness of management controls;

(k) Adequacy of the organization and appropriate resources assigned to assure appropriate training;

(l) In the case of multiple-site training programs, adequacy of management of the satellite centers.

(3) Training facilities and resources. Adequacy and appropriateness of the facilities and resources for supporting the training program should be considered, including:

(a) Space and equipment to conduct the training;

(b) Facilities for representative hands-on training;

(c) In the case of multiple-site programs, equipment and facilities at the satellite centers;

(d) Adequacy and appropriateness of the quality control and evaluations program to account for instructor performance;

(e) Adequacy and appropriateness of the quality control and evaluation program to ensure appropriate course evaluation, feedback, updating, and corrective action;

(f) Adequacy and appropriateness of disciplines and expertise being used within the quality control and evaluation program;

(g) Adequacy and appropriateness of the role of student evaluations to provide feedback for training program improvement.

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(4) Quality control and evaluation. Adequacy and appropriateness of quality control and evaluation plans for training programs should be considered, including:

(a) A balanced advisory committee and/or competent outside reviewers to give overall policy guidance;

(b) Clear and adequate definition of the composition and active programmatic role of the advisory committee or outside reviewers;

(c) Adequacy of the minutes or reports of the advisory committee or outside reviewers' meetings or written communication;

(d) Adequacy and appropriateness of the quality control and evaluations program to account for instructor performance;

(e) Adequacy and appropriateness of the quality control and evaluation program to ensure appropriate course evaluation, feedback, updating, and corrective action;

(f) Adequacy and appropriateness of disciplines and expertise being used within the quality control and evaluation program;

(g) Adequacy and appropriateness of the role of student evaluations to provide feedback for training program improvement.

(5) Students. Adequacy and appropriateness of the program for accepting students should be considered, including:

(a) Assurance that the student already possess the necessary skills for their job, including necessary documentation;

(b) Appropriateness of methods the program uses to ensure that recruits are capable of satisfactorily completing training;

(c) Review and compliance with any medical clearance policy.

(6) Institutional environment and administrative support. The adequacy and appropriateness of the institutional environment and administrative support system for the training program should be considered, including:

(a) Adequacy of the institutional commitment to the employee training program;

(b) Adequacy and appropriateness of the administrative structure and administrative support.

(7) Summary of evaluation questions. Key questions for evaluating the quality and appropriateness of an overall training program should include the following:

(a) Are the program objectives clearly stated?

(b) Is the program accomplishing its objectives?

(c) Are appropriate facilities and staff available?

(d) Is there an appropriate mix of classroom, demonstration, and hands-on training?

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(e) Is the program providing quality employee health and safety training that fully meets the intent of regulatory requirements?

(f) What are the program's main strengths?

(g) What are the program's main weaknesses?

(h) What is recommended to improve the program?

(i) Are instructors instructing according to their training outlines?

(j) Is the evaluation tool current and appropriate for the program content?

(k) Is the course material current and relevant to the target group?

Suggested Training Curriculum Guidelines:

The following training curriculum guidelines are for those operations specifically identified in this Part P, as requiring training. Issues such as qualifications of instructors, training certification, and similar criteria appropriate to all categories of operations addressed in this Part P, have been covered in the preceding section and are not readdressed in each of the generic guidelines. Basic core requirements for training programs that are addressed include: (1) General hazardous waste operations; (2) RCRA operations--Treatment, storage, and disposal facilities.

(1) General hazardous waste operations and site-specific training.

(a) Off-site training. Training course content for hazardous waste operations, required by WAC 296-62-3040 through 296-62-30465, should include the following topics or procedures:

(i) Regulatory knowledge.

(A) A review of this Part P and the core elements of an occupational safety and health program.

(B) The content of a medical surveillance program as outlined in WAC 296-62-3050 through 296-62-30535.

(C) The content of an effective site safety and health plan consistent with the requirements of WAC 296-62-30135(2).

(D) Emergency response plan and procedures as outlined in WAC 296-24-567 and 296-62-3110 through 296-62-31110.

(E) Adequate illumination.

(F) Sanitation recommendation and equipment.

(G) Review and explanation of WISHA's chemical hazard-communication standard WAC 296-800-170, and chapter 296-24 WAC, Part A-4, safety procedures for the control of hazardous energy (lockout/tagout).

(H) Review of other applicable standards including but not limited to those in the construction standards, chapter 296-155 WAC.

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(I) Rights and responsibilities of employers and employees under applicable WISHA/OSHA and department of ecology (DOE)/Environmental Protection Association (EPA) regulations and laws.

(ii) Technical knowledge.

(A) Type of potential exposures to chemical, biological, and radiological hazards; types of human responses to these hazards and recognition of those responses; principles of toxicology and information about acute and chronic hazards; health and safety considerations of new technology.

(B) Fundamentals of chemical hazards including but not limited to vapor pressure, boiling points, flash points, pH, other physical and chemical properties.

(C) Fire and explosion hazards of chemicals.

(D) General safety hazards such as but not limited to electrical hazards, powered equipment hazards, motor vehicle hazards, walking-working surface hazards, excavation hazards, and hazards associated with working in hot and cold temperature extremes.

(E) Review and knowledge of confined space entry procedures in chapter 296-62 WAC, Part M.

(F) Work practices to minimize employee risk from site hazards.

(G) Safe use of engineering controls, equipment, and any new relevant safety technology or safety procedures.

(H) Review and demonstration of competency with air sampling and monitoring equipment that may be used in a site monitoring program.

(I) Container sampling procedures and safeguarding; general drum and container handling procedures including special requirement for laboratory waste packs, shock-sensitive wastes, and radioactive wastes.

(J) The elements of a spill control program.

(K) Proper use and limitations of material handling equipment.

(L) Procedures for safe and healthful preparation of containers for shipping and transport.

(M) Methods of communication including those used while wearing respiratory protection.

(iii) Technical skills.

(A) Selection, use maintenance, and limitations of personal protective equipment including the components and procedures for carrying out a respirator program to comply with chapter 296-62 WAC Part E, Respiratory Protection.

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(B) Instruction in decontamination programs including personnel, equipment, and hardware; hands-on training including Levels A, B, and C ensembles and appropriate decontamination lines; field activities including the donning and doffing of protective equipment to a level commensurate with the employee's anticipated job function and responsibility and to the degree required by potential hazards.

(C) Sources for additional hazard information; exercises using relevant manuals and hazard coding systems.

(iv) Additional suggested items.

(A) A laminated, dated card or certificate with photo, denoting limitations and level of protection for which the employee is trained should be issued to those students successfully completing a course.

(B) Attendance should be required at all training modules, with successful completion of exercises and a final written or oral examination with at least fifty questions.

(C) A minimum of one-third of the program should be devoted to hands-on exercises.

(D) A curriculum should be established for the eight-hour refresher training required by WAC 296-62-30460, with delivery of such courses directed toward those areas of previous training that need improvement or reemphasis.

(E) A curriculum should be established for the required eight-hour training for supervisors. Demonstrated competency in the skills and knowledge provided in forty-hour and eighty-hour courses should be prerequisites for supervisor training.

(b) Refresher training. The eight-hour annual refresher training required in WAC 296-62-30460 should be conducted by qualified training providers. Refresher training should include at a minimum the following topics and procedures:

(i) Review of and retraining on relevant topics covered in the forty-hour and eighty-hour programs, as appropriate, using reports by the students on their work experiences.

(ii) Update on developments with respect to material covered in the forty-hour and eighty-hour courses.

(iii) Review of changes to pertinent provisions of DOE/EPA or WISHA/OSHA standards or laws.

(iv) Introduction of additional subject areas as appropriate.

(v) Hands-on review of new or altered PPE or decontamination equipment or procedures. Review of new developments in personal protective equipment.

(vi) Review of newly developed air and contaminant monitoring equipment.

(c) On-site training. The employer should provide employees engaged in hazardous waste site activities with information and training prior to initial assignment into their work area, as follows:

WAC 296-62-3195 (Cont.)

(i) The requirements of the hazard communication program including the location and availability of the written program, required lists of hazardous chemicals, and material safety data sheets.

(ii) Activities and locations in their work area where hazardous substance may be present.

(iii) Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearances, or other evidence (sight, sound or smell)) of hazardous chemicals being released, and applicable alarms from monitoring devices that record chemical releases.

(iv) The physical and health hazards of substances known or potentially present in the work area.

(v) The measures employees can take to help protect themselves from worksite hazards, including specific procedures the employer has implemented.

(vi) An explanation of the labeling system and material safety data sheets and how employees can obtain and use appropriate hazard information.

(vii) The elements of the confined space program including special PPE, permits, monitoring requirements, communication procedures, emergency response, and applicable lockout procedures.

(d) The employer should provide hazardous waste employees with information and training and should provide a review and access to the site safety and health plan as follows:

(i) Names of personnel and alternate responsible for site safety and health.

(ii) Safety and health hazards present on the site.

(iii) Selection, use, maintenance, and limitations of personal protective equipment specific to the site.

(iv) Work practices by which the employee can minimize risks from hazards.

(v) Safe use of engineering controls and equipment available on site.

(vi) Safe decontamination procedures established to minimize employee contact with hazardous substances, including:

(A) Employee decontamination;

(B) Clothing decontamination; and

(C) Equipment decontamination.

(vii) Elements of the site emergency response plan, including:

(A) Preemergency planning.

(B) Personnel roles and lines of authority and communication.

(C) Emergency recognition and prevention.

WAC 296-62-3195 (Cont.)

(D) Safe distances and places of refuge.

(E) Site security and control.

(F) Evacuation routes and procedures.

(G) Decontamination procedures not covered by the site safety and health plan.

(H) Emergency medical treatment and first aid.

(I) Emergency equipment and procedures for handling emergency incidents.

(e) The employer should provide hazardous waste employees with information and training on personal protective equipment used at the site, such as the following:

(i) PPE to be used based upon known or anticipated site hazards.

(ii) PPE limitations of materials and construction; limitations during temperature extremes, heat stress, and other appropriate medical considerations; use and limitations of respirator equipment as well as documentation procedures as outlined in chapter 296-62 WAC, Part E, Respiratory Protection.

(iii) PPE inspection procedures prior to, during, and after use.

(iv) PPE donning and doffing procedures.

(v) PPE decontamination and disposal procedures.

(vi) PPE maintenance and storage.

(vii) Task duration as related to PPE limitations.

(f) The employer should instruct the employee about the site medical surveillance program relative to the particular site, including:

(i) Specific medical surveillance programs that have been adapted for the site.

(ii) Specific signs and symptoms related to exposure to hazardous materials on the site.

(iii) The frequency and extent of periodic medical examinations that will be used on the site.

(iv) Maintenance and availability of records.

(v) Personnel to be contacted and procedures to be followed when signs and symptoms of exposures are recognized.

(g) The employees will review and discuss the site safety and health plan as part of the training program. The location of the site safety and health plan and all written programs should be discussed with employees including a discussion of the mechanisms for access, review, and references described.

(2) RCRA operations training for treatment, storage and disposal facilities.

(a) As a minimum, the training course required in WAC 296-62-31435 through 296-62-31440 and WAC 296-62-31465 should include the following topics:

WAC 296-62-3195 (Cont.)

(i) Review of the applicable parts of this Part P and the elements of the employer's occupational safety and health plan.

(ii) Review of relevant hazards such as, but not limited to, chemical, biological, and radiological exposures; fire and explosion hazards; thermal extremes; and physical hazards.

(iii) General safety hazards including those associated with electrical hazards, powered equipment hazards, lockout/tagout procedures, motor vehicle hazards and walking-working surface hazards.

(iv) Confined space hazards and procedures.

(v) Work practices to minimize employee risk from workplace hazards.

(vi) Emergency response plan and procedures including first aid meeting the requirements of WAC 296-62-31450.

(vii) A review of procedures to minimize exposure to hazardous waste and various type of waste streams, including the materials handling program and spill containment program.

(viii) A review of chemical hazard communication programs meeting the requirements of WAC 296-800-170.

(ix) A review of medical surveillance programs meeting the requirements of WAC 296-62-3050 and 296-62-31415 including the recognition of signs and symptoms of overexposure to hazardous substance including known synergistic interactions.

(x) A review of decontamination programs and procedures meeting the requirements of WAC 296-62-3100 and 296-62-31420.

(xi) A review of an employer's requirements to implement a training program and its elements.

(xii) A review of the criteria and programs for proper selection and use of personal protective equipment, including respirators.

(xiii) A review of the applicable appendices to this Part P (Appendices A through E).

(xiv) Principles of toxicology and biological monitoring as they pertain to occupational health.

(xv) Rights and responsibilities of employees and employers under applicable WISHA/OSHA and DOE/EPA regulations and laws.

(xvi) Hands-on exercises and demonstrations of competency with equipment to illustrate the basic equipment principles that may be used during the performance of work duties, including the donning and doffing of PPE.

(xvii) Sources of reference, efficient use of relevant manuals, and knowledge of hazard coding systems to include information contained in hazardous waste manifests.

(xviii) At least eight hours of hands-on training.

(xix) Training in the job skills required for an employee's job function and responsibility before they are permitted to participate in or supervise field activities.

WAC 296-62-3195 (Cont.)

(b) The individual employer should provide hazardous waste employees with information and training prior to an employee's initial assignment into a work area. The training and information should cover the following topics:

(i) The emergency response plan and procedures including first aid.

(ii) A review of the employer's hazardous waste handling procedures including the materials handling program and elements of the spill containment program, location of spill response kits or equipment, and the names of those trained to respond to releases.

(iii) The hazardous communication program meeting the requirements of WAC 296-800-170.

(iv) A review of the employer's medical surveillance program including the recognition of signs and symptoms of exposure to relevant hazardous substance including known synergistic interactions.

(v) A review of the employer's decontamination program and procedures.

(vi) A review of the employer's training program and the parties responsible for that program.

(vii) A review of the employer's personal protective equipment program including the proper selection and use of PPE based upon specific site hazards.

(viii) All relevant site-specific procedures addressing potential safety and health hazards. This may include, as appropriate, biological and radiological exposures, fire and explosion hazards, thermal hazards, and physical hazards such as electrical hazards, powered equipment hazards, lockout/tagout hazards, motor vehicle hazards, and walking-working surface hazards.

(ix) Safe use of engineering controls and equipment on-site.

(x) Names of personnel and alternates responsible for safety and health.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038, (Order 99-36), § 296-62-3195, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.040. 99-07-097 (Order 98-38), § 296-62-3195, filed 03/23/99, effective 06/23/99. Statutory Authority: Chapter 49.17 RCW. 95-04-006, 296-62-3195, filed 1/18/95, effective 3/10/95.]